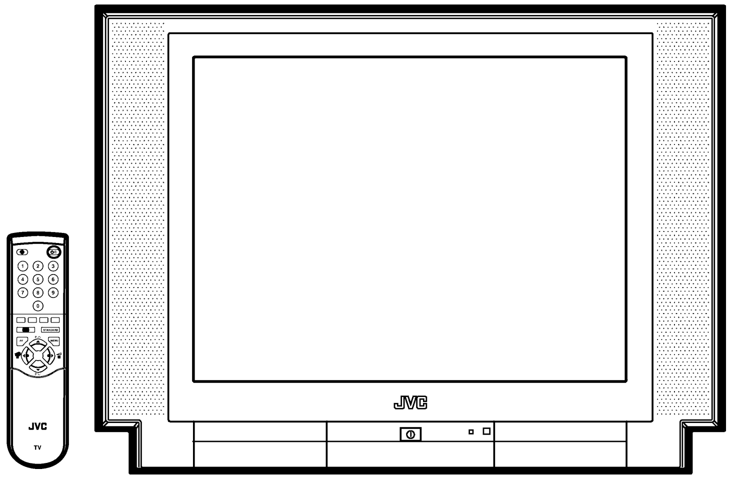
JVC

SERVICE MANUAL

COLOUR TELEVISION

AV29BF10ENS
AV29BF10EPS
AV29BF10EES



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SPECIFICATIONS

ITEM		Content		
		AV29BF10ENS	AV29BF10EPS	AV29BF10EES
Dimensions (WxHxD)		78.4 × 58.2 × 49.3 cm		
Weight		46.2 kg		
TV RF System		B/G	B/G, L	B/G, D/K, K1
Colour System	**TV Mode**	PAL	PAL / SECAM	←
	Video Mode	PAL / NTSC 3.58 / NTSC 4.43	PAL / SECAM / NTSC 3.58 / NTSC 4.43	←
Teletext System		Fastext / Toptext		
Stereo System		German + NICAM		
Tuning System		Frequency Synthesizer Tuning System		
Number Of CH memory position		100 ch		
Receiving Frequency	**VHF (VL)**	46.25MHZ ~ 168.25MHz		
	VHF (VH)	175.25MHz ~ 463.25MHz		
	UHF	471.25MHz ~ 863.25MHz		
	CATV	S1-S20 & S21-S41 & S75-S79	S1-S20 & S21-S41	S1-S20 & S21-S41 & S75-S77
Intermediate Frequency	**VIF Carrier**	38.9MHz		
	SIF Carrier	32.4MHz (6.5MHz)		
		32.9MHz (6.0MHz)		
		33.4MHz (5.5MHz)		
Colour Sub Carrier Frequency		PAL (4.43MHz), SECAM (4.43MHz), NTSC (3.58MHz/4.43MHz)		
Aerial Input Terminal		75 Ohm Unbalanced		
Power Input		AC 220 ~ 240V, 50Hz		
Power Consumption		150W(Max.) / 73W(Avg.)		
Picture Tube		29 inch measured diagonally		
High Voltage		29.5kV (in cut-off service mode)		
Speaker		(77 ×128 mm ellipse type + Tweeter) ×2		
Audio Output		12W + 12W		
Input (FRONT)	**Video**	1Vp-p, 75 Ohm		
	Audio (L/R)	500 mVrms, High Impedance		
Output (REAR)	**Video**	1 Vp-p, 75 Ohm		
	Audio (L/R)	500 mVrms, Low Impedance		
Input Terminal	**Rear Side**	EXT 1 (Video/Audio/RGB)		
		EXT 2 (Video/Audio/S-VHS)		
	Front Side	F AV (Video/Audio)		
Output Terminal	**Front Side**	Headphone jack (Stereo mini jack 3.5∅)		
	Rear Side	EXT 1 (Video/Audio)		
		EXT 2 (Video/Audio) (Selected TV, AV1 or AV3)		
Remote Control Unit		VE-30015781 (RM-C85) , Battery size:AAA/R03 x 2		

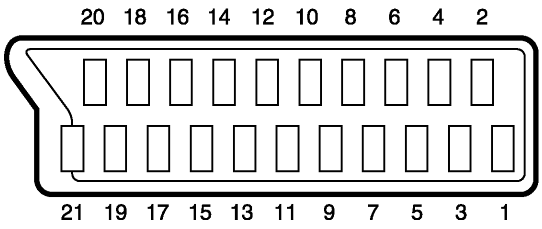
Design & specifications are subject to change without notice.

■21-pin Euro connector (SCART socket) : EXT 1 / EXT 2

(P-P= Peak to Peak, S-W= Sync tip to white peak, B-W= Blanking to white peak)

Pin No.	Signal Designation	Matching Value	EXT 1	EXT 2
1	AUDIO R output	500mVrms(Nominal),Low impedance	○ (TV OUT)	○ (TV/LINE OUT)
2	AUDIO R input	500mVrms(Nominal),High impedance	○	○
3	AUDIO L output	500mVrms(Nominal),Low impedance	○ (TV OUT)	○ (TV/LINE OUT)
4	AUDIO GND		○	○
5	GND (B)		○	○
6	AUDIO L input	500mVrms(Nominal), High impedance	○	○
7	B input	700mV$_{B-W}$, 75Ω	○	NC
8	FUNCTON SW (SLOW SW)	Low : 0-3V, High : 8-12V, High impedance	○	NC
9	GND (G)		○	○
10	-		NC	-
11	G input	700mV$_{B-W}$, 75Ω	○	NC
12	-		NC	-
13	GND (R)		○	○
14	GND (YS)		○	NC
15	R / C input	R : 700mV$_{B-W}$, 75Ω C : 300mV$_{P-P}$, 75Ω	○ (R/C)	○ (only C)
16	Ys input	Low : 0 – 0.4, High : 1 - 3V, 75 Ω	○	NC
17	GND(VIDEO output)		○	○
18	GND(VIDEO input)		○	○
19	VIDEO output	1V$_{S-W}$ (Negative going sync), 75Ω	○ (TV)	○ (TV/LINE OUT)
20	VIDEO / Y input	1V$_{S-W}$ (Negative going sync), 75Ω	○	○
21	COMMON GND		○	○

[Pin assignment]



SAFETY PRECAUTIONS

1. The design of this product contains special hardware, many circuits and components specially for safety purposes. For continued protection, no changes should be made to the original design unless authorized in writing by the manufacturer. Replacement parts must be identical to those used in the original circuits. Service should be performed by qualified personnel only.

2. Alterations of the design or circuitry of the products should not be made. Any design alterations or additions will void the manufacturer's warranty and will further relieve the manufacturer of responsibility for personal injury or property damage resulting therefrom.

3. Many electrical and mechanical parts in the products have special safety-related characteristics. These characteristics are often not evident from visual inspection nor can the protection afforded by them necessarily be obtained by using replacement components rated for higher voltage, wattage, etc. Replacement parts which have these special safety characteristics are identified in the parts list of Service manual. **Electrical components having such features are identified by shading on the schematics and by (⚠) on the parts list in Service manual.** The use of a substitute replacement which does not have the same safety characteristics as the recommended replacement part shown in the parts list of Service manual may cause shock, fire, or other hazards.

4. **Don't short between the LIVE side ground and ISOLATED (NEUTRAL) side ground or EARTH side ground when repairing.**
   Some model's power circuit is partly different in the GND. The difference of the GND is shown by the LIVE side GND, the ISOLATED(NEUTRAL) side GND and EARTH side GND. Don't short between the LIVE side GND and ISOLATED(NEUTRAL) side GND or EARTH side GND and never measure with a measuring apparatus (oscilloscope etc.) the LIVE side GND and ISOLATED(NEUTRAL) side GND or EARTH side GND at the same time.
   If above note will not be kept, a fuse or any parts will be broken.

5. If any repair has been made to the chassis, it is recommended that the B1 setting should be checked or adjusted (See ADJUSTMENT OF B1 POWER SUPPLY).

6. The high voltage applied to the picture tube must conform with that specified in Service manual. Excessive high voltage can cause an increase in X-Ray emission, arcing and possible component damage, therefore operation under excessive high voltage conditions should be kept to a minimum, or should be prevented. If severe arcing occurs, remove the AC power immediately and determine the cause by visual inspection (incorrect installation, cracked or melted high voltage harness, poor soldering, etc.). To maintain the proper minimum level of soft X-Ray emission, components in the high voltage circuitry including the picture tube must be the exact replacements or alternatives approved by the manufacturer of the complete product.

7. Do not check high voltage by drawing an arc. Use a high voltage meter or a high voltage probe with a VTVM. Discharge the picture tube before attempting meter connection, by connecting a clip lead to the ground frame and connecting the other end of the lead through a 10kΩ 2W resistor to the anode button.

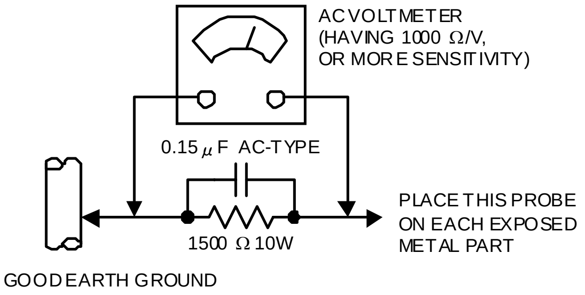
8. When service is required, observe the original lead dress. Extra precaution should be given to assure correct lead dress in the high voltage circuit area. Where a short circuit has occurred, those components that indicate evidence of overheating should be replaced. Always use the manufacturer's replacement components.

9. **Isolation Check**
   (Safety for Electrical Shock Hazard)
   After re-assembling the product, always perform an isolation check on the exposed metal parts of the cabinet (antenna terminals, video/audio input and output terminals, Control knobs, metal cabinet, screwheads, earphone jack, control shafts, etc.) to be sure the product is safe to operate without danger of electrical shock.

(1) **Dielectric Strength Test**
The isolation between the AC primary circuit and all metal parts exposed to the user, particularly any exposed metal part having a return path to the chassis should withstand a voltage of 3000V AC (r.m.s.) for a period of one second.
(. . . . Withstand a voltage of 1100V AC (r.m.s.) to an appliance rated up to 120V, and 3000V AC (r.m.s.) to an appliance rated 200V or more, for a period of one second.)
This method of test requires a test equipment not generally found in the service trade.

(2) **Leakage Current Check**
Plug the AC line cord directly into the AC outlet (do not use a line isolation transformer during this check.). Using a "Leakage Current Tester", measure the leakage current from each exposed metal part of the cabinet, particularly any exposed metal part having a return path to the chassis, to a known good earth ground (water pipe, etc.). Any leakage current must not exceed 0.5mA AC (r.m.s.).
However, in tropical area, this must not exceed 0.2mA AC (r.m.s.).

● **Alternate Check Method**
Plug the AC line cord directly into the AC outlet (do not use a line isolation transformer during this check.). Use an AC voltmeter having 1000 ohms per volt or more sensitivity in the following manner. Connect a 1500Ω 10W resistor paralleled by a 0.15μF AC-type capacitor between an exposed metal part and a known good earth ground (water pipe, etc.). Measure the AC voltage across the resistor with the AC voltmeter. Move the resistor connection to each exposed metal part, particularly any exposed metal part having a return path to the chassis, and measure the AC voltage across the resistor. Now, reverse the plug in the AC outlet and repeat each measurement. Any voltage measured must not exceed 0.75V AC (r.m.s.). This corresponds to 0.5mA AC (r.m.s.).
However, in tropical area, this must not exceed 0.3V AC (r.m.s.). This corresponds to 0.2mA AC (r.m.s.).



FEATURES

1. It is a remote controlled color television.
2. 100 programs from VHF, UHF bands or cable channels can be preset.
3. It can tune cable channels.
4. Controlling the TV is very easy by its menu driven system.
5. It has two Euroconnector sockets for external device (such as video recorder, video games, audio set, etc.)
6. Front AV Input available.
7. Stereo sound systems (German + Nicam) are available.
8. Full function Teletext (Fastext, Toptext).
9. It is possible to connect headphone.
10. Direct channel access.
11. APS (Automatic Programming System).
12. All programs can be named.
13. Forward or backward automatic tuning.
14. Automatic sound mute when no transmission.
15. 5 minutes after the broadcasting (closedown), the TV switches itself automatically to stand-by mode.

MAIN DIFFERENCE LIST

MODEL No. **Parts Name**		**AV29BF10ENS**	**AV29BF10EPS**	**AV29BF10EES**
MAIN PWB		VE-20082209	VE-20083311	VE-20082155
CRT SOCKET PWB		VE-20062535	←	VE-20072781
F CARTON BOX		VE-50022390	VE-50022790	VE-50022788
INST BOOK		VE-50022402	VE-50022856	VE-50022857
TV RF system		B/G	B/G, L	B/G, D/K, K1
Colour system	TV	PAL	PAL / SECAM	←
	VIDEO	PAL NTSC 3.58 NTSC 4.43	PAL / SECAM NTSC 3.58 NTSC 4.43	←
Receiving Frequency	CATV	S01-S41 S75-S79	**B/G** : S01-S41 / S75-S79 **L** : S01-S41 / S75-S77	**B/G** : S01-S41 / S75-S79 **D/K** : S01-S41

SPECIFIC SERVICE INSTRUCTIONS

DISASSEMBLY PROCEDURE

REMOVING THE REAR COVER

1. Remove the **8** screws marked **A**.
2. Remove the **4** screws marked **B**.
3. Withdraw the rear cover toward you.

REMOVING THE MAIN PWB

- After removing the rear cover.

1. Draw out back and remove the MAIN PWB ASS'Y,

CAUTIONS)

Be careful enough when developing a main chassis.
The wire of a POWER TRANSFER does not separate and short-circuit with other parts.

REMOVING THE FRONT AV + HEADPHONE JACK BOARD ASS'Y

- After removing the rear cover.

1. Remove the **2** screws marked **C**, and remove the FRONT AV + HEADPHONE JACK BOARD ASS'Y.

REMOVING THE FRONT CONTROL PWB

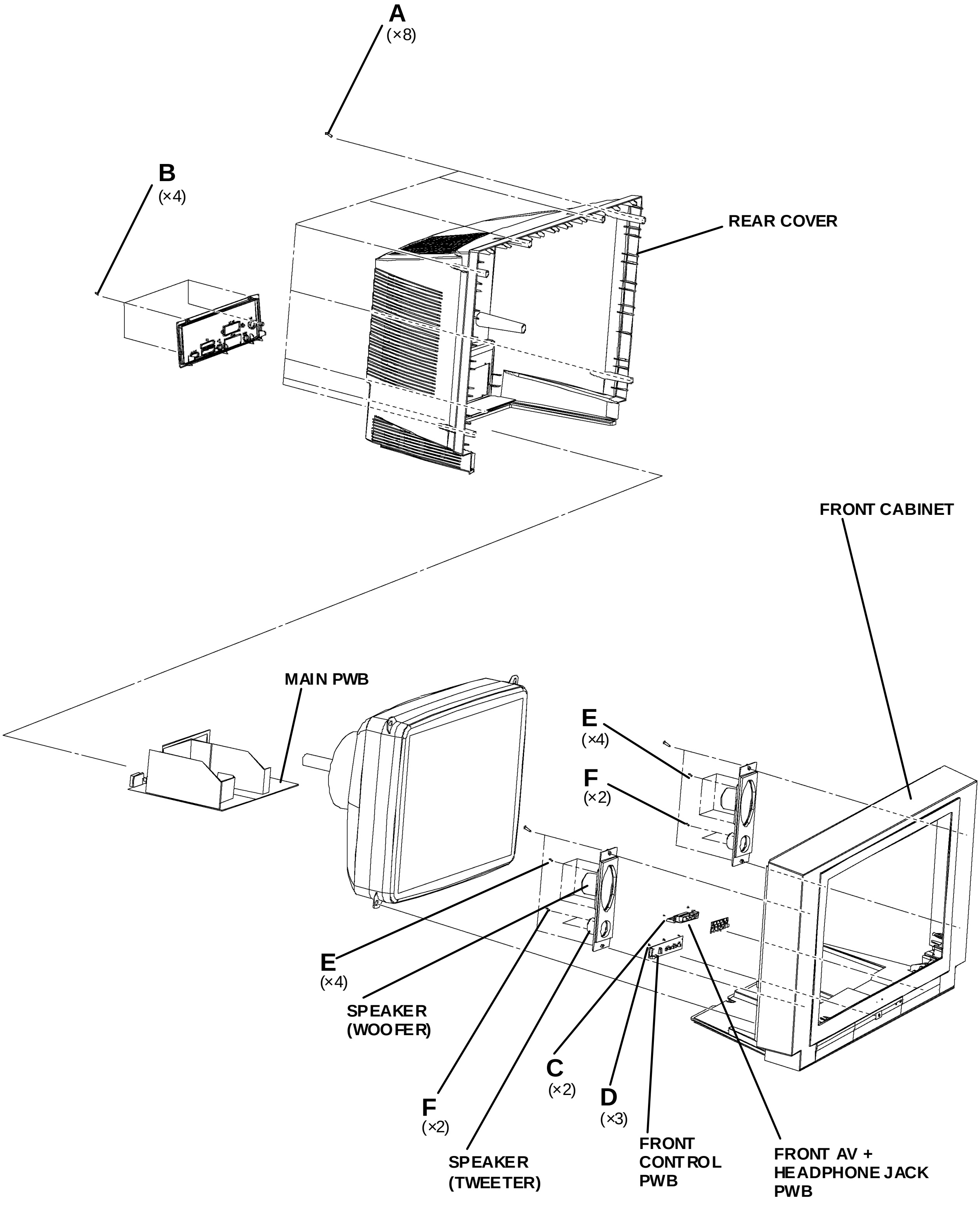
- After removing the rear cover.

1. Remove the MAIN PWB ASS'Y.
2. Remove the **3** screws marked **D**, and remove the FRONT CONTROL PWB.

REMOVING THE SPEAKER

- After removing the rear cover.

1. Remove the **4** screws marked **E**, and remove the WOOFER SPEAKER.
2. Remove the **2** screws marked **F**, and remove the TWEETER SPEAKER.
3. Remove an opposite side similarly.


A
(×8)
B
(×4)
REAR COVER
FRONT CABINET
MAIN PWB
E
(×4)
F
(×2)
E
(×4)
SPEAKER
(WOOFER)
F
(×2)
SPEAKER
(TWEETER)
C
(×2)
D
(×3)
FRONT
CONTROL
PWB
FRONT AV +
HEADPHONE JACK
PWB

SETTING OF THE LAST MEMORY FOR SHIPMENT

■ USER SETTING VALUES

Setting Item	**Setting Value**	**Setting Item**	**Setting Value**
SOUND MENU		FEATURE MENU	
BASS	CENTER	SLEEP TIMER	OFF
TREBLE	↑	CHILD LOCK	OFF
BALANCE	↑		
EFFECT	OFF		
PICTURE MENU		INSTALL → TV CONFIG. MENU	
BRIGHTNESS	These adjust are automatically restored when APS bit in Service menu is set. The procedure for setting APS bit is described bellow.	LANGUAGE	ENGLISH
COLOUR		COUNTRY	?
CONTRAST		EXT-2 OUTPUT	TV
SHARPNESS			
HUE (only NTSC)			
PICTURE MODE	AUTO		

■ SETTING APS BIT IN SERVICE MENU

1) Enter service menu in TV mode by pressing "INFO" and "MUTING" keys simultaneously. Service Menu will appear.
2) Select OPTIONS by pressing Up/Down keys on remote control unit.
3) Enter OPTIONS by pressing Left/Right keys on remote control unit.
4) Select OPTION 8 by pressing Up/Down keys on remote control unit.
5) Selected bit in one OPTION is shown by blinking character. Select B2 by pressing Left/Right keys on remote control unit.
DO NOT CHANGE ANY OTHER BIT.
6) Press digit key "1" to set APS bit.
7) Press "STANDARD" key on remote control unit to exit service mode.

SERVICE ADJUSTMENTS

ADJUSTMENT PREPARATION

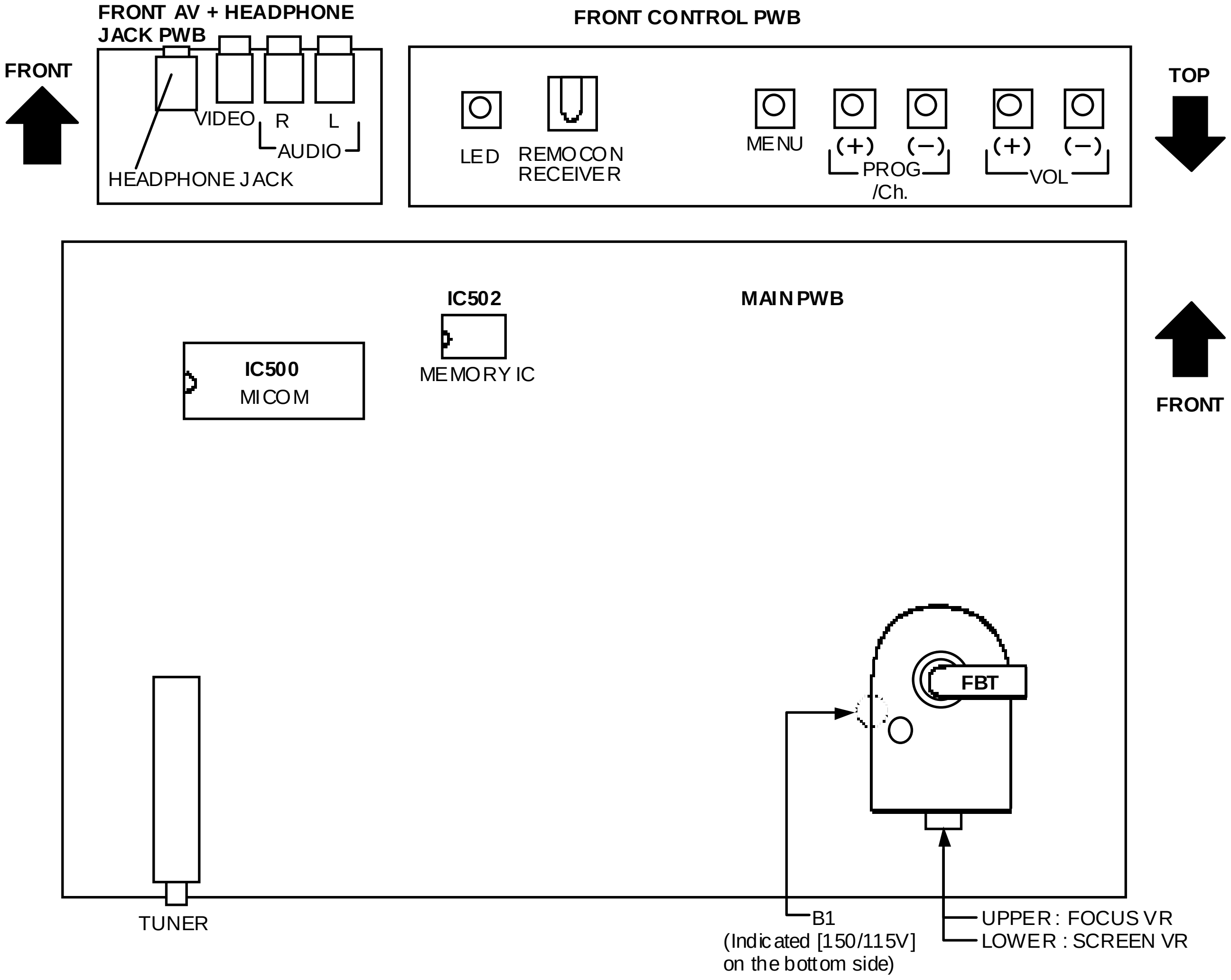
1. **You can make the necessary adjustments for this unit with either the Remote Control Unit or With the adjustment tools and parts as given below.**
2. **Adjustment with the Remote Control Unit is made on the basis of the initial setting values, however, the new setting values which set the screen to its optimum condition may differ from the initial settings.**
3. Make sure that AC power is turned on correctly.
4. Turn on the power for set and test equipment before use, and start the adjustment procedures after waiting at least 30 minutes.
5. Unless otherwise specified, prepare the most suitable reception or input signal for adjustment.
6. Never touch any adjustment parts which are not specified in the list for this adjustment - variable resistors, transformers, condensers, etc.
7. Presetting before adjustment.
   Unless otherwise specified in the adjustment instructions, preset the following functions with the remote control unit:

VIDEO STATUS	STANDARD
TINT / COLOUR	CENTER
PICTURE/BRIGHT	
DETAIL	

ADJUSTMENT EQUIPMENT

1. DC voltmeter (or digital voltmeter)
2. Signal generator (Pattern generator) ［PAL/SECAM/NTSC］
3. Remote control unit

MAIN PARTS LOCATIONS


FRONT AV + HEADPHONE JACK PWB
FRONT CONTROL PWB
FRONT
TOP
VIDEO
R
L
AUDIO
HEADPHONE JACK
LED
REMOCON RECEIVER
MENU
(+)
(−)
PROG /Ch.
(+)
(−)
VOL
IC502
MEMORY IC
MAIN PWB
IC500
MICOM
FRONT
FBT
TUNER
B1
(Indicated [150/115V] on the bottom side)
UPPER : FOCUS VR
LOWER : SCREEN VR

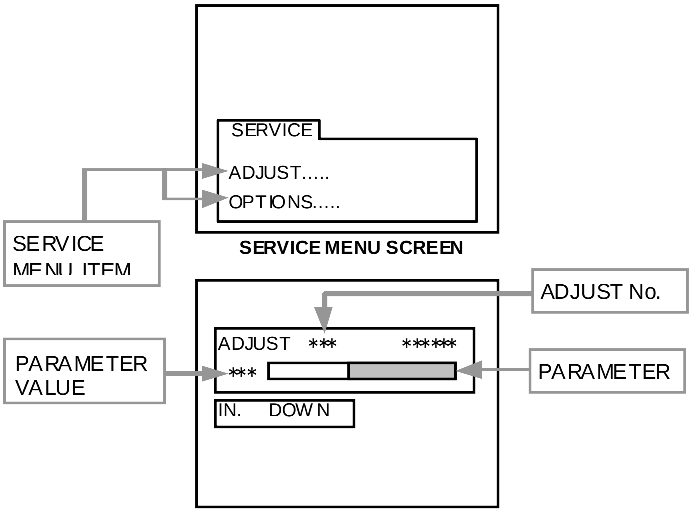
BASIC OPERATION SERVICE MENU

■ HOW TO ENTER THE SERVICE MODE

1) Press the **INFORMATION** key and **MUTING** key of REMOTE CONTROL UNIT simultaneously.

■ SELECTION OF ADJUSTMENT ITEMS

1) Press the **UP** (▲) or **DOWN** (▼) key and select the service menu item.
2) Press the **LEFT** (◀) or **RIGHT** (▶) key and enter ADJUSTMENT SCREEN.
3) Select the ADJUST No., use **UP** (▲) / **DOWN** (▼) key of remote control unit.
4) To change the selected parameter, use **LEFT** (◀) and **RIGHT** (▶) key.


SERVICE
ADJUST.....
OPTIONS.....
SERVICE MENU ITEM
ADJUST No.
PARAMETER VALUE
ADJUST *** ******
***
PARAMETER
IN. DOWN

SERVICE MENU SCREEN

ADJUSTMENT SCREEN

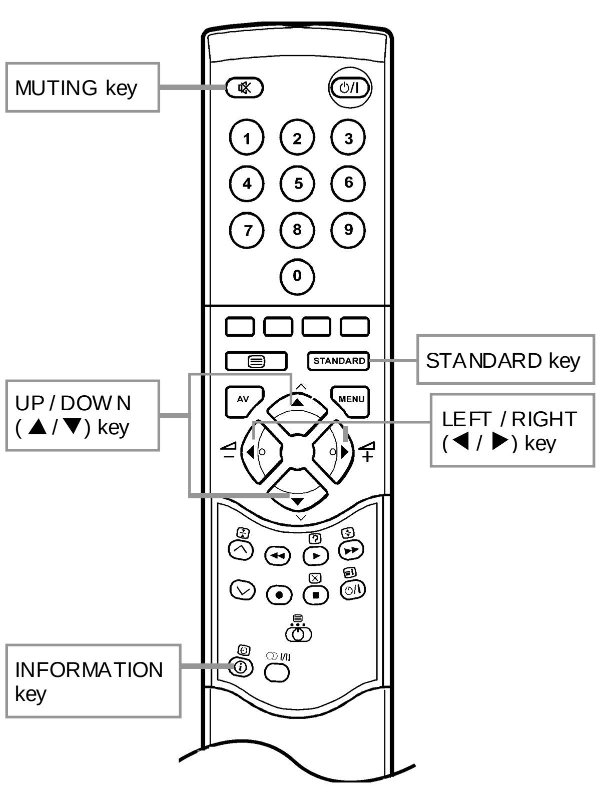
■ HOW TO EXIT SERVICE MODE

1) Press the **STANDARD** Key on REMOTE CONTROL UNIT.

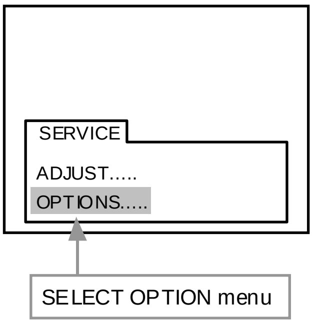
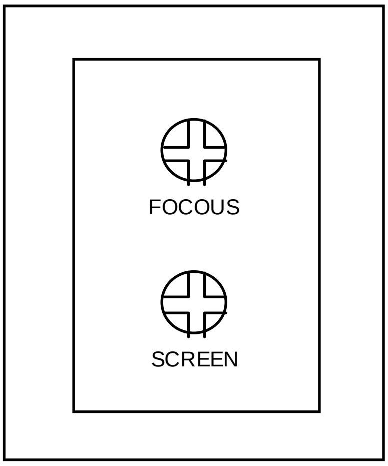
■ ADJUSTMENT SERVICE MENU

ADJUSTMENT ITEM	ADJUST No.	DISCRIPTION
WHITE BALANCE	00	White Point RED
	01	White Point GREEN
	02	White Point BLUE
AGC	03	AGC
IF-PLL NEGATIVE	04	IF-PLL Negative
IF-PLL POSITIVE	05	IF-PLL Positive
LUMINANCE DELAY	06	Y-Delay PAL
	07	Y-Delay SECAM
	08	Y-Delay NTSC
VERTICAL ZOOM	10	4 : 3 PICTURE MODE
	24	16 : 9 PICTURE MODE
VERTICAL SCROLL	11	4 : 3 PICTURE MODE
	25	16 : 9 PICTURE MODE
4 : 3 HORIZONTAL SHIFT	12	4 : 3 PICTURE MODE
	26	16 : 9 PICTURE MODE
VERTICAL SLOPE	13	4 : 3 PICTURE MODE
	27	16 : 9 PICTURE MODE
VERTICAL AMPLITUDE	14	4 : 3 PICTURE MODE
	28	16 : 9 PICTURE MODE
S-CORRECTION	15	4 : 3 PICTURE MODE
	29	16 : 9 PICTURE MODE
VERTICAL SHIFT	16	4 : 3 PICTURE MODE
	30	16 : 9 PICTURE MODE
EW WIDTH	17	4 : 3 PICTURE MODE
	31	16 : 9 PICTURE MODE
EW PARABOLA WIDTH	18	4 : 3 PICTURE MODE
	32	16 : 9 PICTURE MODE
EW UPPER CORNER PARABOLA	19	4 : 3 PICTURE MODE
	33	16 : 9 PICTURE MODE
EW TRAPEZIUM	20	4 : 3 PICTURE MODE
	34	16 : 9 PICTURE MODE
HORIZONTAL PARALLELOGRAM	21	4 : 3 PICTURE MODE
	35	16 : 9 PICTURE MODE
BOW	22	4 : 3 PICTURE MODE
	36	16 : 9 PICTURE MODE
LOWER CORNER PARABOLA	23	4 : 3 PICTURE MODE
	37	16 : 9 PICTURE MODE
DO NOT ADJUST	38~88	DO NOT ADJUST

REMOTE CONTROL UNIT key NAME


MUTING key
1
2
3
4
5
6
7
8
9
0
STANDARD
STANDARD key
UP / DOWN (▲/▼) key
AV
MENU
LEFT / RIGHT (◀ / ▶) key
INFORMATION key

ADJUSTMENTS

Item	Measuring instrument	Test point	Adjustment part	Description
SCREEN VOLTAGE Adjustment **SERVICE MENU**  SERVICE ADJUST..... OPTIONS..... SELECT OPTION menu **FBT** 	**Signal Generator** **Remote Control unit**		**SCREEN VR [FBT]** **OPTION 02**	1. Receive a **PAL** colour bar. 2. Enter the option settings in the SERVICE MENU. 3. Press the UP / DOWN (▲/ ▼) key, and Enter **Option 02**. 4. To change bit 6, come on to it by using L / R (◀ / ▶) key and make it "1" by pressing "1" white bit 2 is blinking. 5. Observe the thin horizontal blue-white line in the middle of the screen, and adjust the lower VR of the FBT, until the line is in its thinnest visible thickness. 6. Then make Option 02 bit 6 "0", by pressing "0" on the remote control unit, although you do not see any picture.
FOCUS Adjustment	**Signal generator**		**FOCUS VR [FBT]**	1. Receive a **PAL** circle pattern. 2. Adjust the upper VR of the FBT, until you get the Optimum focus, the sharpest picture.
B1 VOLTAGE check	**DC Voltmeter**	**Marked [150/115V] on the MAIN PWB**		1. Check whether the voltage at the point named and silk screened as "150 / 115V" on the MAIN PWB is 150V DC.

Item	Measuring instruments	Test point	Adjustment part	Description
WHITE BALANCE	**Signal generator**		**ADJUST 00 (White point - RED)** **ADJUST 01 (White point -GREEN)** **ADJUST 02 (White point - BLUE)**	**[LOW LIGHT]** 1. Receive a whole black signal. 2. Adjust the <Adjust 00>, <Adjust 01>, <Adjust 02>, in the SERVICE MENU so that the entire screen do not shine black. **[HIGH LIGHT]** 1. Receive a white and black signal (colour off). 2. Adjust the <Adjust 00>, <Adjust 01>, <Adjust 02>, in the SERVICE MENU so that the whiteness in the screen become sharp.
AGC Adjustment	**DC voltmeter**		**ADJUST 03**	1. Receive a any broadcast. 2. Select **<ADJUST 03>** from SERVICE MENU 3. Connect a DC voltmeter to pin 1 of the tuner. Change the AGC parameter until you see 3.70V DC on voltmeter display.
IF-PLL NEGATIVE Adjustment			**ADJUST 04**	1. Select **<ADJUST 04>** from SERVICE MENU. 2. Adjustment value is set to 80 as a default value.
IF-PLL POSITIVE Adjustment			**ADJUST 05**	1. Select **<ADJUST 05>** from SERVICE MENU. 2. Adjustment value is set to 80 as a default value.

Item	Measuring instruments	Test point	Adjustment part	Description
LUMINANCE **DELAY** **Adjustment**	**Signal generator**		**Adjust 06**	**[Y-Delay PAL]** 1. Receive a **PAL** colour bar signal. 2. Select **<Adjust 06>** from SERVICE MENU. 3. Adjust Y-Delay PAL till the colour transients on the colour bar of the pattern become as sharper and colours between transients do not mix with each other as possible. Note: If the SAW filter is one of the G1965M, J1951M, K2958M, K2962M, G3957M, K6256K, K6259K or M1963M, there is constant group delay distortion, so for an equal delay of the luminance and chrominance signal the delay must be set at a value of 160nS. This means the adjustment must be set to the maximum value.
			Adjust 07	**[Y-Delay SECAM]** 1. Receive a **SECAM** colour bar signal. 2. Select **<Adjust 07>** from SERVICE MENU. 3. Adjust **Y-Delay SECAM** till the colour transients on the colour bar of the pattern become as sharper and colours between transients do not mix with each other as possible. Note: If the SAW filter is one of the G1965M, K2958M, K2962M, G3957M, K6256K or K6259K, there is constant group delay distortion, so for an equal delay of the luminance and chrominance signal the delay must be set at a value of 160nS. This means the adjustment must be set to the maximum value.
			Adjust 08	**[Y-Delay NTSC]** 1. Receive a **NTSC** colour bar signal. 2. Select **<Adjust 08>** from SERVICE MENU. 3. Adjust **Y-Delay NTSC** till the colour transients on the colour bar of the pattern become as sharper and colours between transients do not mix with each other as possible. Note: If the SAW filter is M1963M, there is constant group delay distortion, so for an equal delay of the luminance and chrominance signal the delay must be set at a value of 160nS. This means the adjustment must be set to the maximum value.

Item	Measuring instruments	Test point	Adjustment part	Description
VERTICAL ZOOM Adjustment	**Signal generator**		**Adjust 10 (4 : 3)** **Adjust 24 (16 : 9)**	1. Receive a **PAL** circle test pattern. 2. Set **< 4 : 3 aspect mode >**. 3. Select **< ADJUST 10 >** from SERVICE MENU. 4. Change vertical zoom till you see the upper and lower limit of the circle as close to the upper and lower limit of the picture tube as possible. 5. Set **< 16 : 9 aspect mode >**. 6. Adjusts with the step which is the same above from 3 to 4 about the 16 : 9 aspect mode, too.
VERTICAL SCROLL Adjustment	**Signal generator**		**Adjust 11 (4 : 3)** **Adjust 25 (16 : 9)**	1. Receive a **PAL** circle test pattern. 2. Set **< 4 : 3 aspect mode >**. 3. Select **< ADJUST 11 >** from SERVICE MENU. 4. Change vertical scroll till you see the circle exactly in the middle of the screen. 5. Set **< 16 : 9 aspect mode >**. 6. Adjusts with the step which is the same above from 3 to 4 about the 16 : 9 aspect mode, too.
4 : 3 HORIZONTAL SHIFT Adjustment	**Signal generator**		**Adjust 12 (4 : 3)** **Adjust 26 (16 : 9)**	1. Receive a **RED PURITY** test pattern. 2. Set **< 4 : 3 aspect mode >**. 3. Select **< ADJUST 12 >** from SERVICE MENU. 4. Change horizontal shift till the picture is horizontally centered. Check whether this adjustment is correct after completing Service Mode Adjustment. 5. Set **< 16 : 9 aspect mode >**. 6. Adjusts with the step which is the same above from 3 to 4 about the 16 : 9 aspect mode, too.
VERTICAL SLOPE Adjustment	**Signal generator**		**Adjust 13 (4 : 3)** **Adjust 27 (16 : 9)**	1. Receive a **CROSS-HATCH** signal. 2. Set **< 4 : 3 aspect mode >**. 3. Select **< ADJUST 13 >** from SERVICE MENU. 4. Change vertical slope till the size of squares on both the upper and lower part of test pattern become equal to the squares laying on the vertical center of the test pattern. 5. Check and readjust VERTICAL SLOPE item if the adjustment becomes improper after some other geometric adjustments are done. 6. Set **< 16 : 9 aspect mode >**. 7. Adjusts with the step which is the same above from 3 to 5 about the 16 : 9 aspect mode, too.
VERTICAL AMPLITUDE Adjustment	**Signal generator**		**Adjust 14 (4 : 3)** **Adjust 28 (16 : 9)**	1. Receive a **PAL** test pattern signal. 2. Set **< 4 : 3 aspect mode >**. 3. Select **< ADJUST 14 >** from SERVICE MENU. 4. Change vertical slope till horizontal black lines on both the upper and lower part of the test pattern become very close to the upper and lower horizontal sides of picture tube and nearly about to disappear. 5. Check and readjust VERTICAL AMPLITUDE item if the adjustment becomes improper after some other geometric adjustments are done. 6. Set **< 16 : 9 aspect mode >**. 7. Adjusts with the step which is the same above from 3 to 5 about the 16 : 9 aspect mode, too.

Item	Measuring instrument	Test point	Adjustment part	Description
S-CORRECTION Adjustment	**Signal generator**		**Adjust 15 (4 : 3)** **Adjust 29 (16 : 9)**	1. Receive a **PAL** circle pattern signal. 2. Set **< 4 : 3 aspect mode >**. 3. Select **< ADJUST 15 >** from SERVICE MENU. 4. Change S-correction till the middle part of the circle is round as possible. 5. Set **< 16 : 9 aspect mode >**. 6. Adjusts with the step which is the same above from 3 to 4 about the 16 : 9 aspect mode, too.
VERTICAL SHIFT Adjustment	**Signal generator**		**Adjust 16 (4 : 3)** **Adjust 30 (16 : 9)**	1. Receive a **PAL** test pattern signal (or the symmetrical signal in the top and the bottom and on either side to find). 2. Set **< 4 : 3 aspect mode >**. 3. Select **< ADJUST 16 >** from SERVICE MENU. 4. Change Vertical Shift till the test pattern is vertically centered, i.e. horizontal line at the center pattern is in equal distance both to upper and lower side of the picture tube. 5. Check and readjust Vertical Shift item if the adjustment becomes improper after some other geometric adjustments are done. 6. Set **< 16 : 9 aspect mode >**. 7. Adjusts with the step which is the same above from 3 to 5 about the 16 : 9 aspect mode, too.
EW WIDTH Adjustment	**Signal generator**		**Adjust 17 (4 : 3)** **Adjust 31 (16 : 9)**	1. Receive a **PAL** test pattern signal. 2. Set **< 4 : 3 aspect mode >**. 3. Select **< ADJUST 17 >** from SERVICE MENU. 4. Change EW Width till the vertical black and white bars on both left and right side of the pattern exactly disappear. 5. Set **< 16 : 9 aspect mode >**. 6. Adjusts with the step which is the same above from 3 to 4 about the 16 : 9 aspect mode, too.
EW PARABOLA WIDTH Adjustment	**Signal generator**		**Adjust 18 (4 : 3)** **Adjust 32 (16 : 9)**	1. Receive a **PAL** test pattern signal. 2. Set **< 4 : 3 aspect mode >**. 3. Select **< ADJUST 18 >** from SERVICE MENU. 4. Change EW Parabola Width till vertical lines close to the both sides of the picture frame become parallel to vertical side of picture tube. 5. Check and readjust EW Parabola Width item if the adjustment becomes improper after some other geometric adjustments are done. 6. Set **< 16 : 9 aspect mode >**. 7. Adjusts with the step which is the same above from 3 to 5 about the 16 : 9 aspect mode, too.
EW UPPER CORNER PARABOLA Adjustment	**Signal generator**		**Adjust 19 (4 : 3)** **Adjust 33 (16 : 9)**	1. Receive a **PAL** test pattern signal. 2. Set **< 4 : 3 aspect mode >**. 3. Select **< ADJUST 19 >** from SERVICE MENU. 4. Change EW Corner Parabola till vertical lines at the corners of both sides of picture frame become vertical and parallel to vertical corner sides of picture tube. 5. Check and readjust EW Corner Parabola item if the adjustment becomes improper after some other geometric adjustments are done. 6. Set **< 16 : 9 aspect mode >**. 7. Adjusts with the step which is the same above from 3 to 5 about the 16 : 9 aspect mode, too.

Item	Measuring instrument	Test point	Adjustment part	Description
EW TRAPEZIUM Adjustment	**Signal generator**		**Adjust 20 (4 : 3)** **Adjust 34 (16 : 9)**	1. Receive a **CROSS-HATCH** signal. 2. Set **< 4 : 3 aspect mode >**. 3. Select **< ADJUST 20 >** from SERVICE MENU. 4. Change EW Trapezium till vertical lines, especially lines at the sides of the picture frame became parallel to the both sides of picture tube as possible. 5. Check and readjust EW Trapezium item if the adjustment becomes improper after some other geometric adjustment. 6. Set **< 16 : 9 aspect mode >**. 7. Adjusts with the step which is the same above from 3 to 5 about the 16 : 9 aspect mode, too.
HORIZONTAL PARALLELO -GRAM	**Signal generator**		**Adjust 21 (4 : 3)** **Adjust 35 (16 : 9)**	1. Receive a **CROSS-HATCH** signal. 2. Set **< 4 : 3 aspect mode >**. 3. Select **< ADJUST 21 >** from SERVICE MENU. 4. Change Horizontal Parallelogram to set vertical lines orthogonal to the horizontal lines.. 5. Check and readjust Horizontal Parallelogram item if the adjustment becomes improper after some other geometric adjustment. 6. Set **< 16 : 9 aspect mode >**. 7. Adjusts with the step which is the same above from 3 to 5 about the 16 : 9 aspect mode, too.
BOW	**Signal generator**		**Adjust 22 (4 : 3)** **Adjust 36 (16 : 9)**	1. Receive a **CROSS-HATCH** signal. 2. Set **< 4 : 3 aspect mode >**. 3. Select **< ADJUST 22 >** from SERVICE MENU. 4. Change Bow to straighten the vertical lines. 5. Check and readjust Bow item if the adjustment becomes improper after some other geometric adjustment. 6. Set **< 16 : 9 aspect mode >**. 7. Adjusts with the step which is the same above from 3 to 5 about the 16 : 9 aspect mode, too.
EW LOWER CORNER PARABOLA Adjustment	**Signal generator**		**Adjust 23 (4 : 3)** **Adjust 37 (16 : 9)**	1. Receive a **CROSS-HATCH** signal. 2. Set **< 4 : 3 aspect mode >**. 3. Select **< ADJUST 23 >** from SERVICE MENU. 4. Change EW Lower Corner Parabola till vertical lines at the corners of both sides of picture frame become vertical and parallel to vertical corner sides of picture tube. 5. Check and readjust EW Lower Corner Parabola item if the adjustment becomes improper after some other geometric adjustment. 6. Set **< 16 : 9 aspect mode >**. 7. Adjusts with the step which is the same above from 3 to 5 about the 16 : 9 aspect mode, too.

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USING PW BOARD & REMOTE CONTROL UNIT

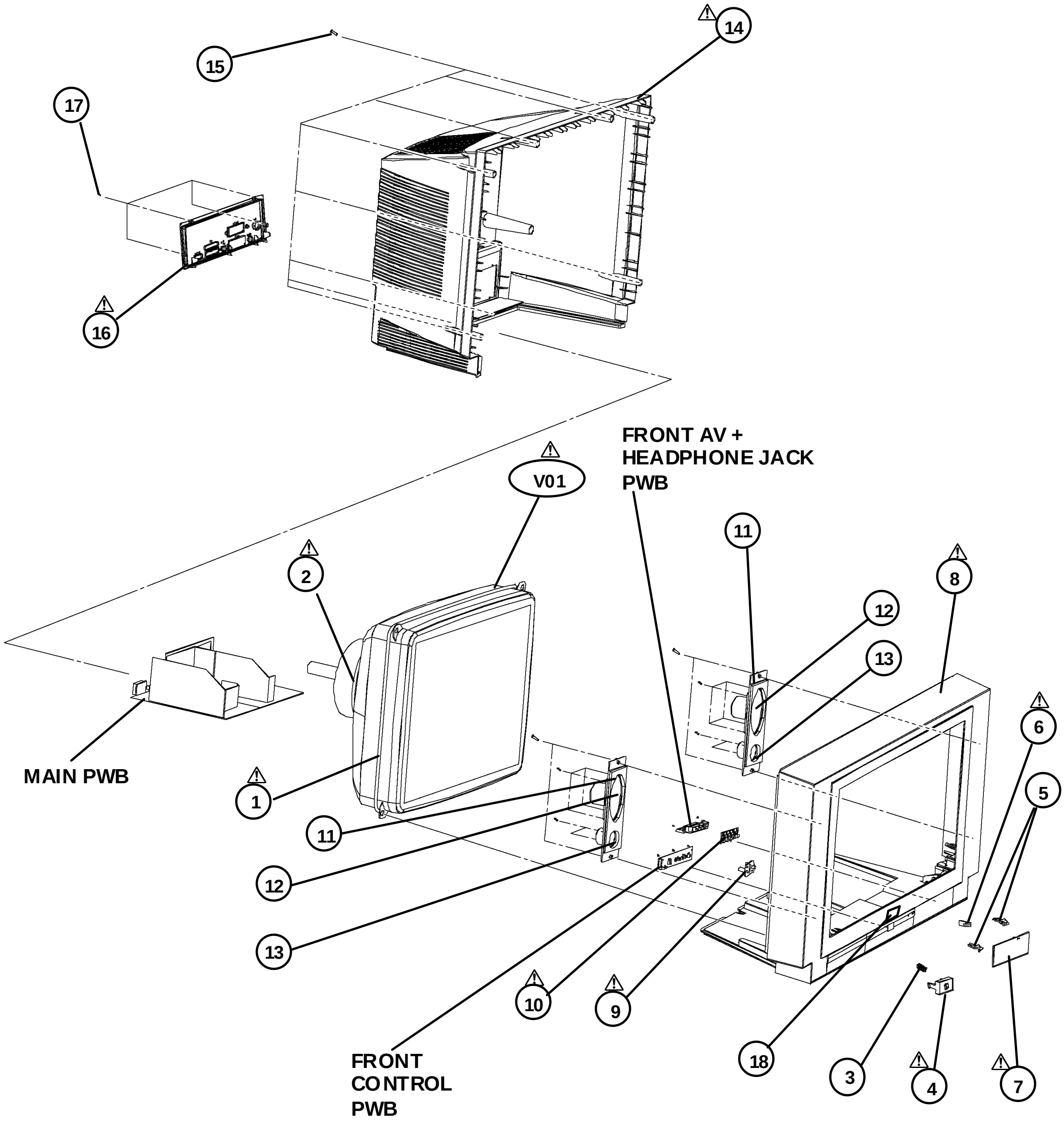
Model PWB ASS'Y	AV29BF10ENS	AV29BF10EPS	AV29BF10EES
MAIN PWB	VE-20082209	VE-20083311	VE-20082155
CRT SOCKET PWB	VE-20062535	←	VE-20072781
FRONT CONTROL PWB	VE-20083267	←	←
FRONT AV + HEADPHONE JACK PWB	VE-20083088	←	←
REMOTE CONTROL UNIT	VE-30015781 (RM-C85)	←	←

EXPLODED VIEW PARTS LIST

[SILVER model : AV29BF10ENS, AV29BF10EES, AV29BF10EPS]

⚠	Ref.No.	Part No.	Part Name	Description
⚠	V01	VE-20085273	CRT KIT (29") AK33J	Inc. DY, PC MAGNET, WEDGE, DEG COIL(VE-30012971)
⚠	1	VE-30012971	DEG COIL	
⚠	2	VE-30015231	ROTATION COIL	
	3	VE-35000013	SPRING ON/OFF SWITCH	
⚠	4	VE-20059930	BUTTON ON/OFF	
	5	VE-20003605	PIN (FRONT AV DOOR)	(X2)
⚠	6	VE-40000026	EJECTOR CLIP-CLAP	
⚠	7	VE-20081204	CONTROL PANEL DOOR	
⚠	8	VE-20082432	FRONT PANEL	
⚠	9	VE-20081212	LENS LED	
⚠	10	VE-20082371	BUTTON FUNCTION	
	11	VE-40009351	SPONGE	(X2)
	12	VE-30001950	SPEAKER 8R 15W (77x128)	(X2)
	13	VE-30001947	TWEETER 8R 15W (CLOSED)	(X2)
⚠	14	VE-20059055	BACK COVER	
	15	VE-35000216	SCREW 3.9X19	(X8)
⚠	16	VE-20084842	BACK DOOR	
	17	VE-35000217	SCREW 3.5X9.5	(X4)
	18	VE-40009154	LOGO JVC	

EXPLODED VIEW


14
15
17
16
V01
FRONT AV + HEADPHONE JACK PWB
11
2
8
12
13
6
MAIN PWB
5
1
11
12
13
10
9
18
3
4
7
FRONT CONTROL PWB

PRINTED WIRING BOARD PARTS LIST

[AV29BF10ENS]

MAIN P.W. BOARD ASS'Y (VE-20082209)

RESISTOR

⚠	Symbol No.	Part No.	Part Name	Description
	R100	VE-30001259	WW RES.	5W 1R J
	R102	VE-30001132	MO RES.	2W 0.22R J
	R106	VE-30000767	CF RES.	1/4W 68R J
	R109	VE-30000913	MF RES.	1/4W 2K J
	R111	VE-30000718	CF RES.	1/4W 4.7K J
	R114	VE-30000729	CF RES.	1/4W 470K J
	R118	VE-30001257	MG RES.	1/2W 4.7M J
	R128	VE-30000513	CF RES.	1/4W 130K J
	R131	VE-30000770	CF RES.	1/4W 680R J
	R132	VE-30000770	CF RES.	1/4W 680R J
	R14	VE-30000481	CF RES.	1/4W 1M J
	R142	VE-30000536	CF RES.	1/4W 150K J
	R144	VE-30006758	MO RES.	1W 0.82R J
	R145	VE-30000477	CF RES.	1/4W 100K J
	R15	VE-30000541	CF RES.	1/4W 1.5M J
	R152	VE-30001132	MO RES.	2W 0.22R J
	R153	VE-30001174	MO RES.	2W 0.47R J
	R157	VE-30000712	CF RES.	1/4W 470R J
	R161	VE-30006755	MO RES.	2W 4.7R J
	R17	VE-30000660	CF RES.	1/4W 3.3K J
	R236	VE-30000792	CF RES.	1/4W 75R J
	R278	VE-30000633	CF RES.	1/4W 27K J
	R294	VE-30000554	CF RES.	1/4W 180R J
	R300	VE-30000583	CF RES.	1/4W 220R J
	R302	VE-30000583	CF RES.	1/4W 220R J
	R303	VE-30000655	CF RES.	1/4W 330R J
	R304	VE-30000655	CF RES.	1/4W 330R J
	R323	VE-30000706	CF RES.	1/4W 47R J
	R329	VE-30000460	CF RES.	1/4W 100R G
	R332	VE-30000471	CF RES.	1/4W 10K J
	R365	VE-30000748	CF RES.	1/4W 5.6K J
	R366	VE-30000760	CF RES.	1/4W 6.2K J
	R369	VE-30000775	CF RES.	1/4W 6.8K J
	R405	VE-30000452	CF RES.	1/4W 10R J
	R411	VE-30000452	CF RES.	1/4W 10R J
	R500	VE-30000500	CF RES.	1/4W 12K J
	R516	VE-30000531	CF RES.	1/4W 15K J
	R537	VE-30000560	CF RES.	1/4W 1.8K J
	R538	VE-30000560	CF RES.	1/4W 1.8K J
	R571	VE-30000752	CF RES.	1/4W 56K J
	R590	VE-30000723	CF RES.	1/4W 47K J
	R598	VE-30000723	CF RES.	1/4W 47K J
	R599	VE-30000723	CF RES.	1/4W 47K J
	R601	VE-30001138	MO RES.	1W 2.7K J
	R603	VE-30001138	MO RES.	1W 2.7K J
⚠	R604	VE-30001244	FUSE RES.	1/2W 0.47R J
	R605	VE-30000628	CF RES.	1/4W 2.7K J
⚠	R606	VE-30001244	FUSE RES.	1/2W 0.47R J
	R607	VE-30000554	CF RES.	1/4W 180R J
⚠	R612	VE-30001232	FUSE RES.	1/4W 2.7R J
	R614	VE-30015721	MO RES.	5W 2.2K J
	R615	VE-30000848	MF RES.	1/4W 1K F
⚠	R617	VE-30001215	FUSE RES.	1W 1R J
	R623	VE-30001134	MO RES.	2W 2.2R J
	R625	VE-30001162	MO RES.	1W 390R J
	R627	VE-30001088	MO RES.	1W 1R J
⚠	R651	VE-30001245	FUSE RES.	1/4W 0.47R J
⚠	R652	VE-30001245	FUSE RES.	1/4W 0.47R J
	R657	VE-30000993	MF RES.	1/4W 51K J
	R658	VE-30007202	MF RES.	1/4W 56K F
	R659	VE-30000865	MF RES.	1/4W 1.2K J
	R670	VE-30015721	MO RES.	5W 2.2K J
	R7	VE-30001155	MO RES.	2W 33K J
	R709	VE-30000466	CF RES.	1/4W 1K J
	R711	VE-30000459	CF RES.	1/4W 100R J
	R712	VE-30000466	CF RES.	1/4W 1K J
	R713	VE-30000466	CF RES.	1/4W 1K J
	R714	VE-30000466	CF RES.	1/4W 1K J
	R719	VE-30000734	CF RES.	1/4W 4.7R J
	R720	VE-30000734	CF RES.	1/4W 4.7R J
	R748	VE-30000670	CF RES.	1/4W 330K J
	R8	VE-30001155	MO RES.	2W 33K J

CAPACITOR

⚠	Symbol No.	Part No.	Part Name	Description
	C1	VE-30000352	EL CAP.	100UF 16V M
⚠	C100	VE-30000094	MKT CAP.	220NF AC275V M
⚠	C101	VE-30007858	MKT CAP.	470NF AC275V M (P=22.5MM)
⚠	C105	VE-30000153	MKP CAP.	330NF 400V J
	C107	VE-30000353	EL CAP.	100UF 25V M
	C11	VE-30006748	EL CAP.	4.7UF 350V M
	C110	VE-30000387	EL CAP.	33UF 50V M
	C111	VE-30000266	CER CAP.	560PF 50V J SL
	C112	VE-30000092	MKT CAP.	220NF 63V J
	C114	VE-30000161	MKP CAP.	47NF 630V J
	C115	VE-30007308	CER CAP.	220PF 1KV K (PULSE)
	C116	VE-30013690	EL CAP.	220UF 450V M 105° C
	C117	VE-30006940	CER CAP.	2.7NF 1KV K B
	C118	VE-30007308	CER CAP.	220PF 1KV K (PULSE)
	C119	VE-30000440	CER CAP.	2.2NF 4KV M
	C12	VE-30006748	EL CAP.	4.7UF 350V M
	C122	VE-30000071	MKT CAP.	10NF 63V J
	C123	VE-30007308	CER CAP.	220PF 1KV K (PULSE)
	C124	VE-30007308	CER CAP.	220PF 1KV K (PULSE)
	C126	VE-30007308	CER CAP.	220PF 1KV K (PULSE)
	C127	VE-30000406	EL CAP.	47UF 250V M (HR)
	C130	VE-30000295	CER CAP.	100NF 50V Z F
	C137	VE-30000383	EL CAP.	2200UF 25V M
	C138	VE-30000383	EL CAP.	2200UF 25V M
	C14	VE-30000436	CER CAP.	10NF 1KV ZE
	C142	VE-30000295	CER CAP.	100NF 50V Z F
	C143	VE-30000359	EL CAP.	1000UF 16V M
	C144	VE-30000360	EL CAP.	1000UF 25V M
	C147	VE-30000375	EL CAP.	220UF 16V M
	C149	VE-30000375	EL CAP.	220UF 16V M
	C15	VE-30000436	CER CAP.	10NF 1KV ZE
	C150	VE-30000375	EL CAP.	220UF 16V M
	C152	VE-30000295	CER CAP.	100NF 50V Z F
	C153	VE-30000295	CER CAP.	100NF 50V Z F
	C155	VE-30007308	CER CAP.	220PF 1KV K (PULSE)
	C16	VE-30000436	CER CAP.	10NF 1KV ZE
	C164	VE-30000411	EL CAP.	4700UF 16V M
	C166	VE-30000438	CER CAP.	2.2NF 2KV
	C167	VE-30007708	CER CAP.	1NF 1KV K (PULSE)
	C17	VE-30000433	CER CAP.	1NF 1KV M B
	C173	VE-30000367	EL CAP.	1UF 250V M
⚠	C180	VE-30000076	MKT CAP.	100NF AC275V M
⚠	C119	VE-30000440	CER CAP.	2.2NF 4KV M
⚠	C181	VE-30000440	CER CAP.	2.2NF 4KV M
	C19	VE-30000335	CER CAP.	47NF 50V Z F
	C217	VE-30000355	EL CAP.	100UF 50V M
	C219	VE-30000345	EL CAP.	10UF 50V M
	C22	VE-30000290	CER CAP.	10NF 50V Z F
	C23	VE-30000146	MKP CAP.	220NF 250V M
	C255	VE-30010571	EL CAP.	10UF 16V M
	C257	VE-30000109	MKT CAP.	470NF 63V J
	C260	VE-30000074	MKT CAP.	100NF 63V J
	C262	VE-30000384	EL CAP.	2.2UF 50V M
	C265	VE-30000283	CER CAP.	1NF 50V K B
	C275	VE-30000362	EL CAP.	1UF 50V M
	C283	VE-30000384	EL CAP.	2.2UF 50V M
	C323	VE-30010571	EL CAP.	10UF 16V M
	C326	VE-30000298	CER CAP.	1.5NF 50V K B
	C355	VE-30000106	MKT CAP.	47NF 100V J
	C356	VE-30000407	EL CAP.	470UF 16V M
	C368	VE-30000330	CER CAP.	4.7NF 50V K B
	C516	VE-30000345	EL CAP.	10UF 50V M
	C532	VE-30000400	EL CAP.	47UF 50V M
	C533	VE-30000400	EL CAP.	47UF 50V M
	C535	VE-30000400	EL CAP.	47UF 50V M
	C536	VE-30000400	EL CAP.	47UF 50V M
	C600	VE-30000360	EL CAP.	1000UF 25V M
	C601	VE-30000075	MKT CAP.	100NF 250V K (DC)
	C603	VE-30000351	EL CAP.	10UF 350V M
	C604	VE-30000075	MKT CAP.	100NF 250V K (DC)
	C605	VE-30000409	EL CAP.	470UF 25V M
	C606	VE-30000071	MKT CAP.	10NF 63V J
	C607	VE-30000402	EL CAP.	47UF 100V M
	C608	VE-30000406	EL CAP.	47UF 250V M (HR)
	C611	VE-30000151	MKP CAP.	3.3NF 2KV %3.5
	C612	VE-30000131	MKP CAP.	100NF 250V J
	C615	VE-30000134	MKP CAP.	11NF 2000V %3.5
	C616	VE-30000137	MKP CAP.	15NF 630V J
	C617	VE-30000172	MKP CAP.	680NF 250V J (P=15)
	C618	VE-30000172	MKP CAP.	680NF 250V J (P=15)

[AV29BF10ENS]

CAPACITOR

⚠	Symbol No.	Part No.	Part Name	Description
	C621	VE-30000360	EL CAP.	1000UF 25V M
	C623	VE-30000296	CER CAP.	100NF 100V Z F
	C635	VE-30000350	EL CAP.	10UF 250V M
	C636	VE-30000444	CER CAP.	470PF 1KV KB
	C637	VE-30000444	CER CAP.	470PF 1KV KB
	C638	VE-30000287	CER CAP.	10NF 50V K B
	C639	VE-30000365	EL CAP.	1UF 160V M
	C640	VE-30000197	CER CAP.	120PF 50V J SL
	C642	VE-30000316	CER CAP.	220NF 25V Z F
	C643	VE-30000074	MKT CAP.	100NF 63V J
	C644	VE-30000074	MKT CAP.	100NF 63V J
	C701	VE-30000345	EL CAP.	10UF 50V M
	C711	VE-30000407	EL CAP.	470UF 16V M
	C740	VE-30000393	EL CAP.	3.3UF 50V M
	C741	VE-30000345	EL CAP.	10UF 50V M
	C742	VE-30000345	EL CAP.	10UF 50V M
	C744	VE-30000345	EL CAP.	10UF 50V M
	C749	VE-30000345	EL CAP.	10UF 50V M
	C760	VE-30000393	EL CAP.	3.3UF 50V M
	C762	VE-30000362	EL CAP.	1UF 50V M
	C763	VE-30000362	EL CAP.	1UF 50V M
	C764	VE-30000074	MKT CAP.	100NF 63V J
	C767	VE-30000409	EL CAP.	470UF 25V M
	C768	VE-30000074	MKT CAP.	100NF 63V J
	C770	VE-30000409	EL CAP.	470UF 25V M
	C776	VE-30000371	EL CAP.	22UF 50V M
	C780	VE-30000371	EL CAP.	22UF 50V M
	C863	VE-30009208	CER CAP.	470PF 1KV K (PULSE)
	C865	VE-30000283	CER CAP.	1NF 50V K B
	C866	VE-30000407	EL CAP.	470UF 16V M

TRANSF

⚠	Symbol No.	Part No.	Part Name	Description
⚠	TR101	VE-30016154	SMPS TRF	
	TR600	VE-30002090	LINE DRIVER	
⚠	TR601	VE-30014072	FBT TRF	

COIL

⚠	Symbol No.	Part No.	Part Name	Description
	L1	VE-30015576	TRF DFOCUS COIL	50HZ E25
⚠	L102	VE-30015617	TRF PFC	200UH
	L200	VE-30001979	FIXED COIL	1UH Q45 M-A
	L201	VE-30006712	FERRITE BEAD	3.5X4.7X0.8
	L202	VE-30006712	FERRITE BEAD	3.5X4.7X0.8
	L212	VE-30001992	FIXED COIL	10UH Q65 K-A
	L225	VE-30013413	FERRITE BEAD	
	L226	VE-30013413	FERRITE BEAD	
	L227	VE-30013413	FERRITE BEAD	
	L228	VE-30013413	FERRITE BEAD	
	L507	VE-30001987	FIXED COIL	4.7UH Q70 K-A
	L600	VE-30002031	FIXED COIL	INJECTION 15MH
	L601	VE-30002028	FIXED COIL	BRIDGE 1.9MH
	L603	VE-30007771	FIXED COIL	100UH
	L700	VE-30001996	FIXED COIL	22UH Q40 K
	L701	VE-30001996	FIXED COIL	22UH Q40 K
	L702	VE-30001996	FIXED COIL	22UH Q40 K
	L704	VE-30001996	FIXED COIL	22UH Q40 K
	L708	VE-30001996	FIXED COIL	22UH Q40 K
	L715	VE-30001996	FIXED COIL	22UH Q40 K

DIODE

⚠	Symbol No.	Part No.	Part Name	Description
	D10	VE-30001291	DIODE	
	D105	VE-30001284	DIODE	
	D11	VE-30001291	DIODE	
	D117	VE-30001315	DIODE	
	D118	VE-30009366	DIODE	
	D119	VE-30001333	DIODE	
	D128	VE-30001284	DIODE	
	D129	VE-30001318	DIODE	
	D131	VE-30001284	DIODE	
⚠	D132	VE-30007758	BRIDGE DIODE	
	D136	VE-30001368	ZENER DIODE	
	D140	VE-30001318	DIODE	
	D141	VE-30001318	DIODE	
	D209	VE-30001284	DIODE	

DIODE

⚠	Symbol No.	Part No.	Part Name	Description
	D600	VE-30001318	DIODE	
	D601	VE-30001318	DIODE	
	D603	VE-30001299	DIODE	
	D604	VE-30001299	DIODE	
	D607	VE-30001284	DIODE	
	D608	VE-30001284	DIODE	
	D609	VE-30001284	DIODE	
	D610	VE-30001318	DIODE	
	D611	VE-30007681	DIODE	
	D612	VE-30007678	DIODE	
	D615	VE-30001377	ZENER DIODE	
	D622	VE-30001318	DIODE	
	D7	VE-30001291	DIODE	
	D8	VE-30001291	DIODE	
	D9	VE-30001291	DIODE	

TRANSISTOR

⚠	Symbol No.	Part No.	Part Name	Description
	Q100	VE-30001386	TR	
	Q101	VE-30001454	TR	
	Q102	VE-30016755	TR	
	Q103	VE-30001454	TR	
	Q105	VE-30001454	TR	
	Q106	VE-30001428	TR	
	Q107	VE-30001384	TR	
	Q4	VE-30006693	TR	
	Q600	VE-30001435	TR	
	Q604	VE-30001429	TR	
	Q605	VE-30001455	TR	

IC

⚠	Symbol No.	Part No.	Part Name	Description
⚠	IC100	VE-30015087	IC	
	IC101	VE-30001668	IC	
	IC102	VE-30001622	IC	
	IC103	VE-30001500	IC	
	IC106	VE-30011968	IC	
	IC107	VE-30011970	IC	
	IC116	VE-30001506	IC	
	IC200	VE-30012090	IC	
	IC201	VE-30001619	IC	
	IC203	VE-30013685	IC	
	IC500	VE-30011957	IC	(MYCOM)
	IC502	VE-20082263	IC	(MEMORY)
	IC503	VE-30001665	IC	
	IC600	VE-30007793	IC	
	IC601	VE-30001506	IC	
	IC700	VE-30001664	IC	
	IC701	VE-30007794	IC	

OTHERS

⚠	Symbol No.	Part No.	Part Name	Description
	CON10	VE-30001891	RCA JACK	
	CON10	VE-30001892	RCA JACK	
	CON10	VE-30001893	RCA JACK	
	CON10	VE-30001900	HEADPHONE JACK	
⚠	F100	VE-20000849	FUSE	3.15A
⚠	J118	VE-30001244	FUSE RES.	
	J203	VE-30006712	FERRITE BEAD	
⚠	L107	VE-30002104	LINE FILTER	
⚠	L108	VE-30002104	LINE FILTER	
	L602	VE-30015221	LINEARITY COIL	
⚠	PL101	VE-30001792	CONN.MALE 2P MOLEX	
	RL100	VE-30002183	RELAY	
⚠	TH100	VE-30001270	PTC	
	TU200	VE-30009637	TUNER	
	X500	VE-30006662	XTAL	
	X700	VE-30001756	XTAL	
	Z200	VE-30013163	SAW FILTER	
	Z201	VE-30014261	SAW FILTER	

[AV29BF10ENS]

CRT SOCKET PWB BOARD ASSY (VE-20062535)

⚠	Symbol No.	Part No.	Part Name	Description
	RESISTOR			
	R900	VE-30000788	CF RES.	1/4W 6.8M J
	R906	VE-30000535	CF RES.	1/2W 150K J
	R909	VE-30000525	CF RES.	1/2W 1.5K J
	R910	VE-30000525	CF RES.	1/2W 1.5K J
	R911	VE-30001125	MO RES.	2W 2.2K J
	R913	VE-30000525	CF RES.	1/2W 1.5K J
	R914	VE-30001084	MO RES.	1W 1K J
	R915	VE-30000580	CF RES.	1/4W 22R J
	R916	VE-30001170	MO RES.	1W 4.7K J
⚠	R917	VE-30001230	FUSE RES.	1/2W 27R J
	R921	VE-30000599	CF RES.	1/4W 220K J
	R922	VE-30000590	CF RES.	1/4W 2.2K J
	CAPACITOR			
	C902	VE-30000415	EL CAP.	4.7UF 250V M
	C905	VE-30000234	CER CAP.	270PF 50V J SL
	C909	VE-30000385	EL CAP.	2.2UF 250V M
	DIODE			
	D901	VE-30001329	DIODE	
	D903	VE-30001329	DIODE	
	D904	VE-30001329	DIODE	
	D909	VE-30001344	ZENER DIODE	
	TRANSISTOR			
	Q900	VE-30001427	TR	
	IC			
	IC900	VE-30008721	IC	
	OTHERS			
⚠	PL900	VE-30001856	CRT SOCKET	
	SG900	VE-30000428	SPARK GAP	
	SG901	VE-30000428	SPARK GAP	
	SG902	VE-30000428	SPARK GAP	
	SG903	VE-30000428	SPARK GAP	
	SG904	VE-30000428	SPARK GAP	

FRONT CONTROL PW BOARD ASSY(VE-20083267)

⚠	Symbol No.	Part No.	Part Name	Description
	OTHERS			
	LD102	VE-30001279	LED	RED/GREEN
	MD101	VE-30001670	PREAMPLIFIER	
	S101	VE-30002181	SWITCH TACT	
	S102	VE-30002181	SWITCH TACT	
	S103	VE-30002181	SWITCH TACT	
	S104	VE-30002181	SWITCH TACT	
	S105	VE-30002181	SWITCH TACT	

FRONT AV + HEADPHONE JACK PW BOARD ASSY (VE-20083088)

⚠	Symbol No.	Part No.	Part Name	Description
	RESISTOR			
	R107	VE-30000594	CF RES.	1/4W 22K J
	R108	VE-30000982	MF RES.	1/4W 4.7K J
	R109	VE-30000594	CF RES.	1/4W 22K J
	R110	VE-30000452	CF RES.	1/4W 10R J
	R113	VE-30000744	CF RES.	1/4W 560R J
	R114	VE-30000744	CF RES.	1/4W 560R J
	R116	VE-30001159	MO RES.	1W 0.33R J
	CAPACITOR			
	C103	VE-30000213	CER CAP.	180PF 50V J CH
⚠	C104	VE-30000213	CER CAP.	180PF 50V J CH
⚠	C106	VE-30000190	CER CAP.	100PF 50V J CH
	COIL			
	L104	VE-30010964	FERRITE BEAT	
	OTHERS			
	T103	VE-30001962	FERRITE	
	T104	VE-30001963	FERRITE	
	T107	VE-30001963	FERRITE	

PRINTED WIRING BOARD PARTS LIST

[AV29BF10EPS]

MAIN P.W. BOARD ASS'Y (VE-20083311)

RESISTOR

⚠	Symbol No.	Part No.	Part Name	Description
	R100	VE-30001259	WW RES.	5W 1R J
	R102	VE-30001132	MO RES.	2W 0.22R J
	R106	VE-30000767	CF RES.	1/4W 68R J
	R109	VE-30000913	MF RES.	1/4W 2K J
	R111	VE-30000718	CF RES.	1/4W 4.7K J
	R114	VE-30000729	CF RES.	1/4W 470K J
⚠	R118	VE-30001257	MG RES.	1/2W 4.7M J
	R128	VE-30000513	CF RES.	1/4W 130K J
	R131	VE-30000770	CF RES.	1/4W 680R J
	R132	VE-30000770	CF RES.	1/4W 680R J
	R14	VE-30000481	CF RES.	1/4W 1M J
	R142	VE-30000536	CF RES.	1/4W 150K J
	R144	VE-30006758	MO RES.	1W 0.82R J
	R145	VE-30000477	CF RES.	1/4W 100K J
	R152	VE-30001132	MO RES.	2W 0.22R J
	R153	VE-30001174	MO RES.	2W 0.47R J
	R157	VE-30000712	CF RES.	1/4W 470R J
	R161	VE-30006755	MO RES.	2W 4.7R J
	R17	VE-30000660	CF RES.	1/4W 3.3K J
	R236	VE-30000792	CF RES.	1/4W 75R J
	R294	VE-30000554	CF RES.	1/4W 180R J
	R300	VE-30000583	CF RES.	1/4W 220R J
	R302	VE-30000583	CF RES.	1/4W 220R J
	R303	VE-30000655	CF RES.	1/4W 330R J
	R304	VE-30000655	CF RES.	1/4W 330R J
	R329	VE-30000460	CF RES.	1/4W 100R G
	R332	VE-30000471	CF RES.	1/4W 10K J
	R344	VE-30000723	CF RES.	1/4W 47K J
	R365	VE-30000748	CF RES.	1/4W 5.6K J
	R366	VE-30000760	CF RES.	1/4W 6.2K J
	R369	VE-30000775	CF RES.	1/4W 6.8K J
	R405	VE-30000452	CF RES.	1/4W 10R J
	R411	VE-30000452	CF RES.	1/4W 10R J
	R432	VE-30000541	CF RES.	1/4W 1.5M J
	R500	VE-30000500	CF RES.	1/4W 12K J
	R516	VE-30000531	CF RES.	1/4W 15K J
	R537	VE-30000560	CF RES.	1/4W 1.8K J
	R538	VE-30000560	CF RES.	1/4W 1.8K J
	R570	VE-30000633	CF RES.	1/4W 27K J
	R571	VE-30000752	CF RES.	1/4W 56K J
	R574	VE-30000706	CF RES.	1/4W 47R J
	R601	VE-30001138	MO RES.	1W 2.7K J
	R603	VE-30001138	MO RES.	1W 2.7K J
⚠	R604	VE-30001244	FUSE RES.	1/2W 0.47R J
	R605	VE-30000628	CF RES.	1/4W 2.7K J
⚠	R606	VE-30001244	FUSE RES.	1/2W 0.47R J
	R607	VE-30000554	CF RES.	1/4W 180R J
⚠	R612	VE-30001232	FUSE RES.	1/4W 2.7R J
	R614	VE-30015721	MO RES.	5W 2.2K J
	R615	VE-30000848	MF RES.	1/4W 1K F
⚠	R617	VE-30001215	FUSE RES.	1W 1R J
	R623	VE-30001134	MO RES.	2W 2.2R J
	R625	VE-30001162	MO RES.	1W 390R J
	R627	VE-30001088	MO RES.	1W 1R J
⚠	R651	VE-30001245	FUSE RES.	1/4W 0.47R J
⚠	R652	VE-30001245	FUSE RES.	1/4W 0.47R J
	R657	VE-30000993	MF RES.	1/4W 51K J
	R658	VE-30007202	MF RES.	1/4W 56K F
	R659	VE-30000865	MF RES.	1/4W 1.2K J
	R670	VE-30015721	MO RES.	5W 2.2K J
	R7	VE-30001155	MO RES.	2W 33K J
	R709	VE-30000466	CF RES.	1/4W 1K J
	R711	VE-30000459	CF RES.	1/4W 100R J
	R712	VE-30000466	CF RES.	1/4W 1K J
	R713	VE-30000466	CF RES.	1/4W 1K J
	R714	VE-30000466	CF RES.	1/4W 1K J
	R719	VE-30000734	CF RES.	1/4W 4.7R J
	R720	VE-30000734	CF RES.	1/4W 4.7R J
	R748	VE-30000670	CF RES.	1/4W 330K J
	R8	VE-30001155	MO RES.	2W 33K J

CAPACITOR

⚠	Symbol No.	Part No.	Part Name	Description
⚠	C100	VE-30000094	MKT CAP.	220NF AC275V M
⚠	C101	VE-30007858	MKT CAP.	470NF AC275V M(P=22.5MM)
⚠	C105	VE-30000153	MKP CAP.	330NF 400V J
	C107	VE-30000353	EL CAP.	100UF 25V M

CAPACITOR

⚠	Symbol No.	Part No.	Part Name	Description
	C11	VE-30006748	EL CAP.	4.7UF 350V M
	C110	VE-30000387	EL CAP.	33UF 50V M
	C111	VE-30000266	CER CAP.	560PF 50V J SL
	C114	VE-30000161	MKP CAP.	47NF 630V J
	C115	VE-30007308	CER CAP.	220PF 1KV K (PULSE)
	C116	VE-30013690	EL CAP.	220UF 450V M 105° C
	C117	VE-30006940	CER CAP.	2.7NF 1KV K B
	C118	VE-30007308	CER CAP.	220PF 1KV K (PULSE)
	C119	VE-30000440	CER CAP.	2.2NF 4KV M
	C12	VE-30006748	EL CAP.	4.7UF 350V M
	C122	VE-30000071	MKT CAP.	10NF 63V J
	C123	VE-30007308	CER CAP.	220PF 1KV K (PULSE)
	C124	VE-30007308	CER CAP.	220PF 1KV K (PULSE)
	C126	VE-30007308	CER CAP.	220PF 1KV K (PULSE)
	C127	VE-30000406	EL CAP.	47UF 250V M (HR)
	C130	VE-30000295	CER CAP.	100NF 50V Z F
	C137	VE-30000383	EL CAP.	2200UF 25V M
	C138	VE-30000383	EL CAP.	2200UF 25V M
	C14	VE-30000436	CER CAP.	10NF 1KV ZE
	C142	VE-30000295	CER CAP.	100NF 50V Z F
	C143	VE-30000359	EL CAP.	1000UF 16V M
	C144	VE-30000360	EL CAP.	1000UF 25V M
	C147	VE-30000375	EL CAP.	220UF 16V M
	C148	VE-30000400	EL CAP.	47UF 50V M
	C149	VE-30000375	EL CAP.	220UF 16V M
	C15	VE-30000436	CER CAP.	10NF 1KV ZE
	C150	VE-30000375	EL CAP.	220UF 16V M
	C152	VE-30000295	CER CAP.	100NF 50V Z F
	C153	VE-30000295	CER CAP.	100NF 50V Z F
	C155	VE-30007308	CER CAP.	220PF 1KV K (PULSE)
	C16	VE-30000436	CER CAP.	10NF 1KV ZE
	C164	VE-30000411	EL CAP.	4700UF 16V M
	C173	VE-30000367	EL CAP.	1UF 250V M
⚠	C180	VE-30000076	MKT CAP.	100NF AC275V M
⚠	C119	VE-30000440	CER CAP.	2.2NF 4KV M
⚠	C181	VE-30000440	CER CAP.	2.2NF 4KV M
	C182	VE-30007708	CER CAP.	1NF 1KV K (PULSE)
	C19	VE-30000335	CER CAP.	47NF 50V Z F
	C217	VE-30000355	EL CAP.	100UF 50V M
	C219	VE-30000345	EL CAP.	10UF 50V M
	C22	VE-30000290	CER CAP.	10NF 50V Z F
	C23	VE-30000146	MKP CAP.	220NF 250V M
	C255	VE-30010571	EL CAP.	10UF 16V M
	C262	VE-30000384	EL CAP.	2.2UF 50V M
	C265	VE-30000283	CER CAP.	1NF 50V K B
	C274	VE-30000352	EL CAP.	100UF 16V M
	C275	VE-30000362	EL CAP.	1UF 50V M
	C280	VE-30000092	MKT CAP.	220NF 63V J
	C283	VE-30000384	EL CAP.	2.2UF 50V M
	C285	VE-30000092	MKT CAP.	220NF 63V J
	C306	VE-30000352	EL CAP.	100UF 16V M
	C323	VE-30010571	EL CAP.	10UF 16V M
	C326	VE-30000298	CER CAP.	1.5NF 50V K B
	C355	VE-30000106	MKT CAP.	47NF 100V J
	C356	VE-30000407	EL CAP.	470UF 16V M
	C363	VE-30000352	EL CAP.	100UF 16V M
	C364	VE-30000352	EL CAP.	100UF 16V M
	C365	VE-30000352	EL CAP.	100UF 16V M
	C502	VE-30000074	MKT CAP.	100NF 63V J
	C516	VE-30000345	EL CAP.	10UF 50V M
	C520	VE-30000352	EL CAP.	100UF 16V M
	C534	VE-30000109	MKT CAP.	470NF 63V J
	C540	VE-30007708	CER CAP.	1NF 1KV K (PULSE)
	C600	VE-30000360	EL CAP.	1000UF 25V M
	C603	VE-30000351	EL CAP.	10UF 350V M
	C605	VE-30000409	EL CAP.	470UF 25V M
	C606	VE-30000071	MKT CAP.	10NF 63V J
	C607	VE-30000402	EL CAP.	47UF 100V M
	C608	VE-30000406	EL CAP.	47UF 250V M (HR)
	C611	VE-30000151	MKP CAP.	3.3NF 2KV %3.5
	C612	VE-30000131	MKP CAP.	100NF 250V J
	C615	VE-30000134	MKP CAP.	11NF 2000V %3.5
	C616	VE-30000137	MKP CAP.	15NF 630V J
	C617	VE-30000172	MKP CAP.	680NF 250V J (P=15)
	C618	VE-30000172	MKP CAP.	680NF 250V J (P=15)
	C621	VE-30000360	EL CAP.	1000UF 25V M
	C623	VE-30000296	CER CAP.	100NF 100V Z F
	C626	VE-30000092	MKT CAP.	220NF 63V J

[AV29BF10EPS]

⚠	Symbol No.	Part No.	Part Name	Description

CAPACITOR

	C635	VE-30000350	EL CAP.	10UF 250V M
	C636	VE-30000444	CER CAP.	470PF 1KV KB
	C637	VE-30000444	CER CAP.	470PF 1KV KB
	C638	VE-30000287	CER CAP.	10NF 50V K B
	C639	VE-30000365	EL CAP.	1UF 160V M
	C640	VE-30000197	CER CAP.	120PF 50V J SL
	C642	VE-30000316	CER CAP.	220NF 25V Z F
	C700	VE-30000352	EL CAP.	100UF 16V M
	C701	VE-30000345	EL CAP.	10UF 50V M
	C711	VE-30000407	EL CAP.	470UF 16V M
	C740	VE-30000393	EL CAP.	3.3UF 50V M
	C741	VE-30000345	EL CAP.	10UF 50V M
	C742	VE-30000345	EL CAP.	10UF 50V M
	C744	VE-30000345	EL CAP.	10UF 50V M
	C749	VE-30000345	EL CAP.	10UF 50V M
	C759	VE-30000352	EL CAP.	100UF 16V M
	C760	VE-30000393	EL CAP.	3.3UF 50V M
	C762	VE-30000362	EL CAP.	1UF 50V M
	C763	VE-30000362	EL CAP.	1UF 50V M
	C767	VE-30000409	EL CAP.	470UF 25V M
	C770	VE-30000409	EL CAP.	470UF 25V M
	C776	VE-30000371	EL CAP.	22UF 50V M
	C780	VE-30000371	EL CAP.	22UF 50V M
	C863	VE-30009208	CER CAP.	470PF 1KV K (PULSE)
	C865	VE-30000283	CER CAP.	1NF 50V K B
	C866	VE-30000407	EL CAP.	470UF 16V M
	C900	VE-30000075	MKT CAP.	100NF 250V K (DC)
	C901	VE-30000433	CER CAP.	1NF 1KV M B
	C903	VE-30000438	CER CAP.	2.2NF 2KV
	C907	VE-30000075	MKT CAP.	100NF 250V K (DC)

TRANSF

⚠	TR101	VE-30016154	SMPS TRF	
	TR600	VE-30002090	LINE DRIVER	
⚠	TR601	VE-30014072	FBT TRF	

COIL

	L1	VE-30015576	TRF DFOCUS COIL	50HZ E25
⚠	L102	VE-30015617	TRF PFC	200UH
	L103	VE-30001996	FIXED COIL	22UH Q40 K
	L103	VE-30010964	FERRITE BEAT	
	L200	VE-30001979	FIXED COIL	1UH Q45 M-A
	L201	VE-30006712	FERRITE BEAD	3.5X4.7X0.8
	L202	VE-30006712	FERRITE BEAD	3.5X4.7X0.8
	L212	VE-30001992	FIXED COIL	10UH Q65 K-A
	L225	VE-30013413	FERRITE BEAD	
	L226	VE-30013413	FERRITE BEAD	
	L227	VE-30013413	FERRITE BEAD	
	L228	VE-30013413	FERRITE BEAD	
	L507	VE-30001987	FIXED COIL	4.7UH Q70 K-A
	L600	VE-30002031	FIXED COIL	INJECTION 15MH
	L601	VE-30002028	FIXED COIL	BRIDGE 1.9MH
	L603	VE-30007771	FIXED COIL	100UH

DIODE

	D10	VE-30001291	DIODE	
	D106	VE-30001284	DIODE	
	D11	VE-30001291	DIODE	
	D118	VE-30009366	DIODE	
	D119	VE-30001333	DIODE	
	D123	VE-30001344	ZENER DIODE	
	D127	VE-30001315	DIODE	
	D129	VE-30001318	DIODE	
⚠	D132	VE-30007758	BRIDGE DIODE	
	D133	VE-30001315	DIODE	
	D136	VE-30001368	ZENER DIODE	
	D139	VE-30001284	DIODE	
	D140	VE-30001318	DIODE	
	D141	VE-30001318	DIODE	
	D600	VE-30001318	DIODE	
	D601	VE-30001318	DIODE	
	D603	VE-30001299	DIODE	
	D604	VE-30001299	DIODE	
	D610	VE-30001318	DIODE	
	D612	VE-30007678	DIODE	
	D615	VE-30001377	ZENER DIODE	

⚠	Symbol No.	Part No.	Part Name	Description

DIODE

	D622	VE-30001318	DIODE	
	D7	VE-30001291	DIODE	
	D8	VE-30001291	DIODE	
	D9	VE-30001291	DIODE	

TRANSISTOR

	Q100	VE-30001386	TR	
	Q102	VE-30016755	TR	
	Q106	VE-30001428	TR	
	Q107	VE-30001384	TR	
	Q3	VE-30001454	TR	
	Q4	VE-30006693	TR	
	Q600	VE-30001435	TR	
	Q604	VE-30001429	TR	
	Q605	VE-30001455	TR	

IC

⚠	IC100	VE-30015087	IC	
	IC101	VE-30001668	IC	
	IC102	VE-30001622	IC	
	IC103	VE-30001500	IC	
	IC106	VE-30011968	IC	
	IC107	VE-30011970	IC	
	IC116	VE-30001506	IC	
	IC200	VE-30012090	IC	
	IC201	VE-30001619	IC	
	IC203	VE-30013685	IC	
	IC500	VE-30011957	IC	(MYCOM)
	IC502	VE-20083332	IC	(SERVICE)
	IC503	VE-30001665	IC	
	IC600	VE-30007793	IC	
	IC601	VE-30001506	IC	
	IC700	VE-30001664	IC	
	IC701	VE-30007794	IC	

OTHERS

	CON10	VE-30001891	RCA JACK	
	CON10	VE-30001892	RCA JACK	
	CON10	VE-30001893	RCA JACK	
	CON10	VE-30001900	HEADPHONE JACK	
⚠	F100	VE-20000849	FUSE	3.15A
⚠	J118	VE-30001244	FUSE RES.	
	J203	VE-30006712	FERRITE BEAD	
⚠	L107	VE-30002104	LINE FILTER	
⚠	L108	VE-30002104	LINE FILTER	
	L602	VE-30015221	LINEARITY COIL	
⚠	PL101	VE-30001792	CONN.MALE 2P MOLEX	
	RL100	VE-30002183	RELAY	
⚠	TH100	VE-30001270	PTC	
	TU200	VE-30009637	TUNER	
	X500	VE-30006662	XTAL	
	X700	VE-30001756	XTAL	
	Z200	VE-30012545	SAW FILTER	
	Z201	VE-30001692	SAW FILTER	

CRT SOCKET P.W. BOARD ASS'Y (VE-20062535)

Refer to PARTS LIST in page 22 for this P.W. board.

FRONT CONTROL P.W. BOARD ASS'Y (VE-20083267)

Refer to PARTS LIST in page 22 for this P.W. board.

FRONT AV + HEADPHONE JACK P.W. BOARD ASS'Y (VE-20083088)

Refer to PARTS LIST in page 22 for this P.W. board.

PRINTED WIRING BOARD PARTS LIST

[AV29BF10EES]

MAIN P.W. BOARD ASS'Y (VE-20082155)

⚠	Symbol No.	Part No.	Part Name	Description
	RESISTOR			
	R100	VE-30001259	WW RES.	5W 1R J
	R102	VE-30001132	MO RES.	2W 0.22R J
	R106	VE-30000767	CF RES.	1/4W 68R J
	R109	VE-30000913	MF RES.	1/4W 2K J
	R113	VE-30000471	CF RES.	1/4W 10K J
	R114	VE-30000729	CF RES.	1/4W 470K J
⚠	R118	VE-30001257	MG RES.	1/2W 4.7M J
	R122	VE-30000459	CF RES.	1/4W 100R J
	R128	VE-30000513	CF RES.	1/4W 130K J
	R13	VE-30000633	CF RES.	1/4W 27K J
	R130	VE-30000471	CF RES.	1/4W 10K J
	R131	VE-30000770	CF RES.	1/4W 680R J
	R132	VE-30000770	CF RES.	1/4W 680R J
	R14	VE-30000481	CF RES.	1/4W 1M J
	R142	VE-30000536	CF RES.	1/4W 150K J
	R144	VE-30006758	MO RES.	1W 0.82R J
	R15	VE-30000541	CF RES.	1/4W 1.5M J
	R152	VE-30001132	MO RES.	2W 0.22R J
	R153	VE-30001174	MO RES.	2W 0.47R J
	R157	VE-30000712	CF RES.	1/4W 470R J
	R161	VE-30006755	MO RES.	2W 4.7R J
	R17	VE-30000660	CF RES.	1/4W 3.3K J
	R206	VE-30000459	CF RES.	1/4W 100R J
	R207	VE-30000459	CF RES.	1/4W 100R J
	R236	VE-30000792	CF RES.	1/4W 75R J
	R279	VE-30000471	CF RES.	1/4W 10K J
	R294	VE-30000554	CF RES.	1/4W 180R J
	R298	VE-30000471	CF RES.	1/4W 10K J
	R300	VE-30000583	CF RES.	1/4W 220R J
	R302	VE-30000583	CF RES.	1/4W 220R J
	R303	VE-30000655	CF RES.	1/4W 330R J
	R304	VE-30000655	CF RES.	1/4W 330R J
	R309	VE-30000459	CF RES.	1/4W 100R J
	R329	VE-30000460	CF RES.	1/4W 100R G
	R331	VE-30000459	CF RES.	1/4W 100R J
	R335	VE-30000459	CF RES.	1/4W 100R J
	R344	VE-30000723	CF RES.	1/4W 47K J
	R365	VE-30000748	CF RES.	1/4W 5.6K J
	R366	VE-30000760	CF RES.	1/4W 6.2K J
	R369	VE-30000775	CF RES.	1/4W 6.8K J
	R405	VE-30000452	CF RES.	1/4W 10R J
	R411	VE-30000452	CF RES.	1/4W 10R J
	R500	VE-30000500	CF RES.	1/4W 12K J
	R501	VE-30000471	CF RES.	1/4W 10K J
	R505	VE-30000471	CF RES.	1/4W 10K J
	R506	VE-30000471	CF RES.	1/4W 10K J
	R513	VE-30000471	CF RES.	1/4W 10K J
	R516	VE-30000531	CF RES.	1/4W 15K J
	R530	VE-30000718	CF RES.	1/4W 4.7K J
	R537	VE-30000560	CF RES.	1/4W 1.8K J
	R538	VE-30000560	CF RES.	1/4W 1.8K J
	R560	VE-30000459	CF RES.	1/4W 100R J
	R561	VE-30000459	CF RES.	1/4W 100R J
	R571	VE-30000752	CF RES.	1/4W 56K J
	R574	VE-30000706	CF RES.	1/4W 47R J
	R600	VE-30000459	CF RES.	1/4W 100R J
	R601	VE-30001138	MO RES.	1W 2.7K J
	R603	VE-30001138	MO RES.	1W 2.7K J
⚠	R604	VE-30001244	FUSE RES.	1/2W 0.47R J
	R605	VE-30000628	CF RES.	1/4W 2.7K J
⚠	R606	VE-30001244	FUSE RES.	1/2W 0.47R J
	R607	VE-30000554	CF RES.	1/4W 180R J
	R611	VE-30000471	CF RES.	1/4W 10K J
⚠	R612	VE-30001232	FUSE RES.	1/4W 2.7R J
	R614	VE-30015721	MO RES.	5W 2.2K J
	R615	VE-30000848	MF RES.	1/4W 1K F
⚠	R617	VE-30001215	FUSE RES.	1W 1R J
	R623	VE-30001134	MO RES.	2W 2.2R J
	R625	VE-30001162	MO RES.	1W 390R J
	R626	VE-30000471	CF RES.	1/4W 10K J
	R627	VE-30001088	MO RES.	1W 1R J
	R629	VE-30000471	CF RES.	1/4W 10K J
⚠	R651	VE-30001245	FUSE RES.	1/4W 0.47R J
⚠	R652	VE-30001245	FUSE RES.	1/4W 0.47R J
	R657	VE-30000993	MF RES.	1/4W 51K J
	R658	VE-30007202	MF RES.	1/4W 56K F
	R659	VE-30000865	MF RES.	1/4W 1.2K J
	R670	VE-30015721	MO RES.	5W 2.2K J

⚠	Symbol No.	Part No.	Part Name	Description
	RESISTOR			
	R7	VE-30001155	MO RES.	2W 33K J
	R705	VE-30000459	CF RES.	1/4W 100R J
	R709	VE-30000466	CF RES.	1/4W 1K J
	R712	VE-30000466	CF RES.	1/4W 1K J
	R713	VE-30000466	CF RES.	1/4W 1K J
	R714	VE-30000466	CF RES.	1/4W 1K J
	R719	VE-30000734	CF RES.	1/4W 4.7R J
	R720	VE-30000734	CF RES.	1/4W 4.7R J
	R748	VE-30000670	CF RES.	1/4W 330K J
	R8	VE-30001155	MO RES.	2W 33K J
	R907	VE-30000477	CF RES.	1/4W 100K J
	R908	VE-30000477	CF RES.	1/4W 100K J
	R912	VE-30000477	CF RES.	1/4W 100K J
	CAPACITOR			
⚠	C100	VE-30000094	MKT CAP.	220NF AC275V M
⚠	C101	VE-30007858	MKT CAP.	470NF AC275V M (P=22.5MM)
⚠	C105	VE-30000153	MKP CAP.	330NF 400V J
	C107	VE-30000353	EL CAP.	100UF 25V M
	C11	VE-30006748	EL CAP.	4.7UF 350V M
	C110	VE-30000387	EL CAP.	33UF 50V M
	C111	VE-30000266	CER CAP.	560PF 50V J SL
	C112	VE-30000092	MKT CAP.	220NF 63V J
	C114	VE-30000161	MKP CAP.	47NF 630V J
	C115	VE-30007308	CER CAP.	220PF 1KV K (PULSE)
	C116	VE-30013690	EL CAP.	220UF 450V M 105°C
	C117	VE-30006940	CER CAP.	2.7NF 1KV K B
	C118	VE-30007308	CER CAP.	220PF 1KV K (PULSE)
	C119	VE-30000440	CER CAP.	2.2NF 4KV M
	C12	VE-30006748	EL CAP.	4.7UF 350V M
	C122	VE-30000071	MKT CAP.	10NF 63V J
	C123	VE-30007308	CER CAP.	220PF 1KV K (PULSE)
	C124	VE-30007308	CER CAP.	220PF 1KV K (PULSE)
	C126	VE-30007308	CER CAP.	220PF 1KV K (PULSE)
	C127	VE-30000406	EL CAP.	47UF 250V M (HR)
	C130	VE-30000295	CER CAP.	100NF 50V Z F
	C137	VE-30000383	EL CAP.	2200UF 25V M
	C138	VE-30000383	EL CAP.	2200UF 25V M
	C14	VE-30000436	CER CAP.	10NF 1KV ZE
	C142	VE-30000295	CER CAP.	100NF 50V Z F
	C143	VE-30000359	EL CAP.	1000UF 16V M
	C144	VE-30000360	EL CAP.	1000UF 25V M
	C147	VE-30000375	EL CAP.	220UF 16V M
	C149	VE-30000375	EL CAP.	220UF 16V M
	C15	VE-30000436	CER CAP.	10NF 1KV ZE
	C150	VE-30000375	EL CAP.	220UF 16V M
	C152	VE-30000295	CER CAP.	100NF 50V Z F
	C153	VE-30000295	CER CAP.	100NF 50V Z F
	C155	VE-30007308	CER CAP.	220PF 1KV K (PULSE)
	C16	VE-30000436	CER CAP.	10NF 1KV ZE
	C164	VE-30000411	EL CAP.	4700UF 16V M
	C17	VE-30000433	CER CAP.	1NF 1KV M B
	C173	VE-30000367	EL CAP.	1UF 250V M
⚠	C180	VE-30000076	MKT CAP.	100NF AC275V M
⚠	C119	VE-30000440	CER CAP.	2.2NF 4KV M
⚠	C181	VE-30000440	CER CAP.	2.2NF 4KV M
	C182	VE-30007708	CER CAP.	1NF 1KV K (PULSE)
	C217	VE-30000355	EL CAP.	100UF 50V M
	C23	VE-30000146	MKP CAP.	220NF 250V M
	C255	VE-30010571	EL CAP.	10UF 16V M
	C262	VE-30000384	EL CAP.	2.2UF 50V M
	C265	VE-30000283	CER CAP.	1NF 50V K B
	C274	VE-30000352	EL CAP.	100UF 16V M
	C275	VE-30000362	EL CAP.	1UF 50V M
	C283	VE-30000384	EL CAP.	2.2UF 50V M
	C304	VE-30000345	EL CAP.	10UF 50V M
	C306	VE-30000352	EL CAP.	100UF 16V M
	C323	VE-30010571	EL CAP.	10UF 16V M
	C325	VE-30000345	EL CAP.	10UF 50V M
	C326	VE-30000298	CER CAP.	1.5NF 50V K B
	C355	VE-30000106	MKT CAP.	47NF 100V J
	C356	VE-30000407	EL CAP.	470UF 16V M
	C363	VE-30000352	EL CAP.	100UF 16V M
	C364	VE-30000352	EL CAP.	100UF 16V M
	C365	VE-30000352	EL CAP.	100UF 16V M
	C368	VE-30000335	CER CAP.	47NF 50V Z F

CAPACITOR

⚠	Symbol No.	Part No.	Part Name	Description
	C502	VE-30000074	MKT CAP.	100NF 63V J
	C520	VE-30000352	EL CAP.	100UF 16V M
	C524	VE-30000290	CER CAP.	10NF 50V Z F
	C525	VE-30000290	CER CAP.	10NF 50V Z F
	C526	VE-30000290	CER CAP.	10NF 50V Z F
	C527	VE-30000290	CER CAP.	10NF 50V Z F
	C532	VE-30000400	EL CAP.	47UF 50V M
	C533	VE-30000400	EL CAP.	47UF 50V M
	C534	VE-30000109	MKT CAP.	470NF 63V J
	C535	VE-30000400	EL CAP.	47UF 50V M
	C536	VE-30000400	EL CAP.	47UF 50V M
	C540	VE-30007708	CER CAP.	1NF 1KV K (PULSE)
	C600	VE-30000360	EL CAP.	1000UF 25V M
	C601	VE-30000075	MKT CAP.	100NF 250V K (DC)
	C603	VE-30000351	EL CAP.	10UF 350V M
	C604	VE-30000075	MKT CAP.	100NF 250V K (DC)
	C605	VE-30000409	EL CAP.	470UF 25V M
	C606	VE-30000071	MKT CAP.	10NF 63V J
	C607	VE-30000402	EL CAP.	47UF 100V M
	C608	VE-30000406	EL CAP.	47UF 250V M (HR)
	C611	VE-30000151	MKP CAP.	3.3NF 2KV %3.5
	C612	VE-30000131	MKP CAP.	100NF 250V J
	C615	VE-30000134	MKP CAP.	11NF 2000V %3.5
	C616	VE-30000137	MKP CAP.	15NF 630V J
	C617	VE-30000172	MKP CAP.	680NF 250V J (P=15)
	C618	VE-30000172	MKP CAP.	680NF 250V J (P=15)
	C621	VE-30000360	EL CAP.	1000UF 25V M
	C623	VE-30000296	CER CAP.	100NF 100V Z F
	C636	VE-30000444	CER CAP.	470PF 1KV KB
	C637	VE-30000444	CER CAP.	470PF 1KV KB
	C638	VE-30000287	CER CAP.	10NF 50V K B
	C639	VE-30000365	EL CAP.	1UF 160V M
	C640	VE-30000197	CER CAP.	120PF 50V J SL
	C642	VE-30000316	CER CAP.	220NF 25V Z F
	C700	VE-30000352	EL CAP.	100UF 16V M
	C711	VE-30000407	EL CAP.	470UF 16V M
	C740	VE-30000393	EL CAP.	3.3UF 50V M
	C759	VE-30000352	EL CAP.	100UF 16V M
	C760	VE-30000393	EL CAP.	3.3UF 50V M
	C762	VE-30000362	EL CAP.	1UF 50V M
	C763	VE-30000362	EL CAP.	1UF 50V M
	C767	VE-30000409	EL CAP.	470UF 25V M
	C770	VE-30000409	EL CAP.	470UF 25V M
	C776	VE-30000371	EL CAP.	22UF 50V M
	C780	VE-30000371	EL CAP.	22UF 50V M
	C863	VE-30009208	CER CAP.	470PF 1KV K (PULSE)
	C865	VE-30000283	CER CAP.	1NF 50V K B
	C866	VE-30000407	EL CAP.	470UF 16V M
	C903	VE-30000438	CER CAP.	2.2NF 2KV
	C906	VE-30000350	EL CAP.	10UF 250V M

TRANSF

⚠	Symbol No.	Part No.	Part Name	Description
⚠	TR101	VE-30016154	SMPS TRF	
	TR600	VE-30002090	LINE DRIVER	
⚠	TR601	VE-30014072	FBT TRF	

COIL

⚠	Symbol No.	Part No.	Part Name	Description
	L1	VE-30015576	TRF DFOCUS COIL	50HZ E25
⚠	L102	VE-30015617	TRF PFC	200UH
	L103	VE-30001996	FIXED COIL	22UH Q40 K
	L103	VE-30010964	FERRITE BEAT	
	L105	VE-30001992	FIXED COIL	10UH Q65 K-A
	L200	VE-30001979	FIXED COIL	1UH Q45 M-A
	L201	VE-30006712	FERRITE BEAD	3.5X4.7X0.8
	L202	VE-30006712	FERRITE BEAD	3.5X4.7X0.8
	L209	VE-30001992	FIXED COIL	10UH Q65 K-A
	L210	VE-30001992	FIXED COIL	10UH Q65 K-A
	L225	VE-30013413	FERRITE BEAD	
	L226	VE-30013413	FERRITE BEAD	
	L227	VE-30013413	FERRITE BEAD	
	L228	VE-30013413	FERRITE BEAD	
	L500	VE-30001992	FIXED COIL	10UH Q65 K-A
	L501	VE-30001992	FIXED COIL	10UH Q65 K-A
	L502	VE-30001992	FIXED COIL	10UH Q65 K-A
	L503	VE-30001992	FIXED COIL	10UH Q65 K-A
	L504	VE-30001992	FIXED COIL	10UH Q65 K-A

COIL

⚠	Symbol No.	Part No.	Part Name	Description
	L507	VE-30001987	FIXED COIL	4.7UH Q70 K-A
	L600	VE-30002031	FIXED COIL	INJECTION 15MH
	L601	VE-30002028	FIXED COIL	BRIDGE 1.9MH
	L603	VE-30007771	FIXED COIL	100UH

DIODE

⚠	Symbol No.	Part No.	Part Name	Description
	D108	VE-30007681	DIODE	
	D111	VE-30001291	DIODE	
	D117	VE-30001315	DIODE	
	D118	VE-30009366	DIODE	
	D119	VE-30001333	DIODE	
	D129	VE-30001318	DIODE	
⚠	D132	VE-30007758	BRIDGE DIODE	
	D136	VE-30001368	ZENER DIODE	
	D137	VE-30007681	DIODE	
	D140	VE-30001318	DIODE	
	D141	VE-30001318	DIODE	
	D600	VE-30001318	DIODE	
	D601	VE-30001318	DIODE	
	D603	VE-30001299	DIODE	
	D604	VE-30001299	DIODE	
	D610	VE-30001318	DIODE	
	D612	VE-30007678	DIODE	
	D613	VE-30001291	DIODE	
	D615	VE-30001377	ZENER DIODE	
	D622	VE-30001318	DIODE	
	D905	VE-30001284	DIODE	
	D906	VE-30001284	DIODE	
	D907	VE-30001284	DIODE	
	D908	VE-30001284	DIODE	

TRANSISTOR

⚠	Symbol No.	Part No.	Part Name	Description
	Q100	VE-30001386	TR	
	Q101	VE-30001454	TR	
	Q102	VE-30016755	TR	
	Q103	VE-30001454	TR	
	Q105	VE-30001454	TR	
	Q106	VE-30001428	TR	
	Q107	VE-30001384	TR	
	Q4	VE-30006693	TR	
	Q600	VE-30001435	TR	
	Q604	VE-30001429	TR	
	Q605	VE-30001455	TR	

IC

⚠	Symbol No.	Part No.	Part Name	Description
⚠	IC100	VE-30015087	IC	
	IC101	VE-30001668	IC	
	IC102	VE-30001622	IC	
	IC103	VE-30001500	IC	
	IC106	VE-30011968	IC	
	IC107	VE-30011970	IC	
	IC116	VE-30001506	IC	
	IC200	VE-30012090	IC	
	IC201	VE-30001619	IC	
	IC203	VE-30013685	IC	
	IC500	VE-30011957	IC	(MYCOM)
	IC502	VE-20082153	IC	(SERVICE)
	IC503	VE-30001665	IC	
	IC600	VE-30007793	IC	
	IC601	VE-30001506	IC	
	IC700	VE-30001664	IC	
	IC701	VE-30007794	IC	

OTHERS

⚠	Symbol No.	Part No.	Part Name	Description
	CAB90	VE-30000190	CER CAP.	100PF 50V J CH
	CON10	VE-30001891	RCA JACK	
	CON10	VE-30001892	RCA JACK	
	CON10	VE-30001893	RCA JACK	
	CON10	VE-30001900	HEADPHONE JACK	
	DX906	VE-30000190	CER CAP.	100PF 50V J CH
⚠	F100	VE-20000849	FUSE	3.15A
⚠	J118	VE-30001244	FUSE RES.	
	J203	VE-30006712	FERRITE BEAD	
⚠	L107	VE-30002104	LINE FILTER	

OTHERS

⚠	Symbol No.	Part No.	Part Name	Description
⚠	L108	VE-30002104	LINE FILTER	
	L602	VE-30015221	LINEARITY COIL	
⚠	PL101	VE-30001792	CONN.MALE 2P MOLEX	
	RL100	VE-30002183	RELAY	
⚠	TH100	VE-30001270	PTC	
	TU200	VE-30009637	TUNER	
	X500	VE-30006662	XTAL	
	X700	VE-30001756	XTAL	
	Z200	VE-30012545	SAW FILTER	
	Z201	VE-30001692	SAW FILTER	

CRT SOCKET PW BOARD ASSY (VE-20072781)

RESISTOR

⚠	Symbol No.	Part No.	Part Name	Description
	R900	VE-30000788	CF RES.	1/4W 6.8M J
	R906	VE-30000535	CF RES.	1/2W 150K J
	R909	VE-30000525	CF RES.	1/2W 1.5K J
	R910	VE-30000525	CF RES.	1/2W 1.5K J
	R911	VE-30001125	MO RES.	2W 2.2K J
	R913	VE-30000525	CF RES.	1/2W 1.5K J
	R914	VE-30001084	MO RES.	1W 1K J
	R915	VE-30000580	CF RES.	1/4W 22R J
	R916	VE-30001170	MO RES.	1W 4.7K J
⚠	R917	VE-30001230	FUSE RES.	1/2W 27R J
	R921	VE-30000599	CF RES.	1/4W 220K J
	R922	VE-30000590	CF RES.	1/4W 2.2K J

CAPACITOR

⚠	Symbol No.	Part No.	Part Name	Description
	C902	VE-30000415	EL CAP.	4.7UF 250V M
	C905	VE-30000234	CER CAP.	270PF 50V J SL
	C909	VE-30000385	EL CAP.	2.2UF 250V M

DIODE

⚠	Symbol No.	Part No.	Part Name	Description
	D901	VE-30001329	DIODE	
	D903	VE-30001329	DIODE	
	D904	VE-30001329	DIODE	
	D909	VE-30001344	ZENER DIODE	

TRANSISTOR

⚠	Symbol No.	Part No.	Part Name	Description
	Q900	VE-30001427	TR	

IC

⚠	Symbol No.	Part No.	Part Name	Description
	IC900	VE-30008721	IC	

OTHERS

⚠	Symbol No.	Part No.	Part Name	Description
⚠	PL900	VE-30001855	CRT SOCKET	
	SG900	VE-30000428	SPARK GAP	
	SG901	VE-30000428	SPARK GAP	
	SG902	VE-30000428	SPARK GAP	
	SG903	VE-30000428	SPARK GAP	
	SG904	VE-30000428	SPARK GAP	

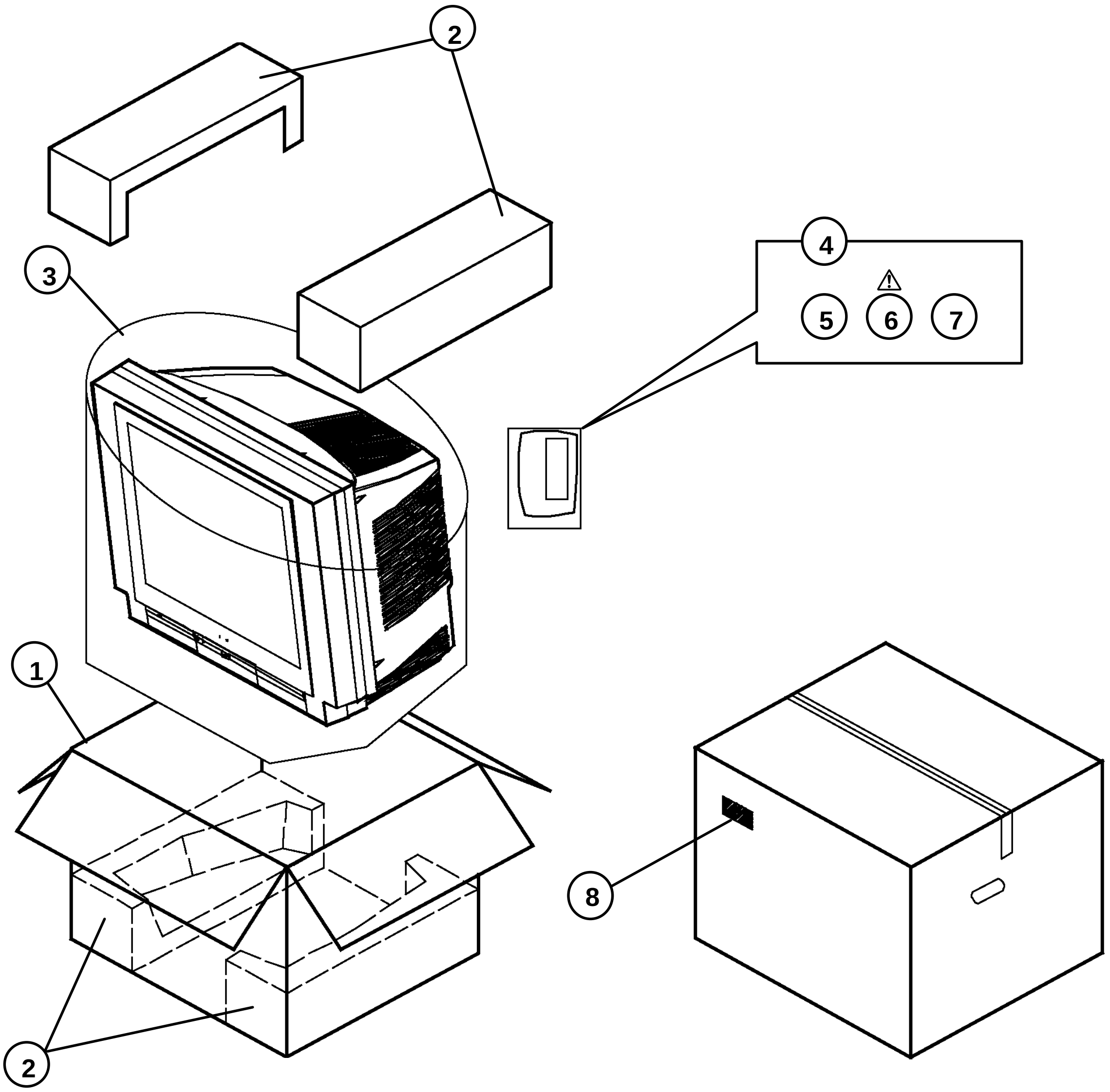
FRONT CONTROL P.W. BOARD ASS'Y (VE-20083267)

Refer to PARTS LIST in page 22 for this P.W. board.

FRONT AV + HEADPHONE JACK P.W. BOARD ASS'Y (VE-20083088)

Refer to PARTS LIST in page 22 for this P.W. board.

PACKING



PACKING PARTS LIST

⚠	Ref.No.	Part No.	Part Name	Description
	1	VE-50022390	F CARTON BOX	(AV29BF10ENS)
	1	VE-50022788	F CARTON BOX	(AV29BF10EES)
	1	VE-50022790	F CARTON BOX	(AV29BF10EPS)
	2	VE-20048248	CUSHION ASS'Y	4 pcs in 1 set
	3	VE-50020732	POLY BAG (1400*1000)	
	4	VE-70000587	POLY BAG	
	5	VE-30015781	REMOTE CONTROL UNIT	(RM-C85)
⚠	6	VE-50022402	INST BOOK	(AV29BF10ENS)
⚠	6	VE-50022857	INST BOOK	(AV29BF10EES)
⚠	6	VE-50022856	INST BOOK	(AV29BF10EPS)
	7	BT-54013-2TK	WARRANTY CARD	
	8	VE-20084576	LABEL	(AV29BF10ENS)
	8	VE-20083465	LABEL	(AV29BF10EES)
	8	VE-20083482	LABEL	(AV29BF10EPS)

VICTOR COMPANY OF JAPAN, LIMITED
HOME AV NETWORK BUSINESS UNIT 12, 3-chome, Moriya-cho, Kanagawa-ku, Yokohama, Kanagawa-prefecture, 221-8528, Japan

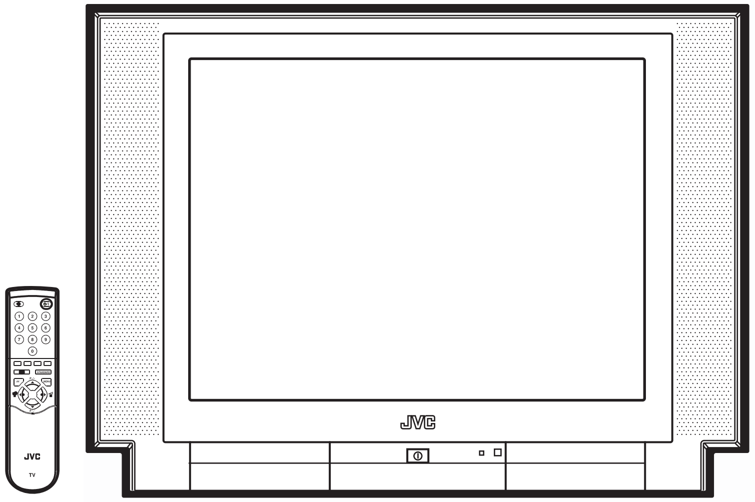
JVC

SCHEMATIC DIAGRAMS

COLOUR TELEVISION

AV29BF10ENS
AV29BF10EPS
AV29BF10EES

CD-ROM No.SML200203



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- CIRCUIT DIAGRAMS 2-5
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- VOLTAGE TABLES 2-21

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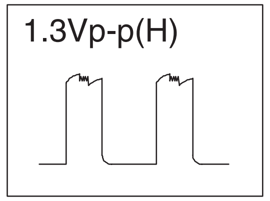
No.51936
Mar. 2002

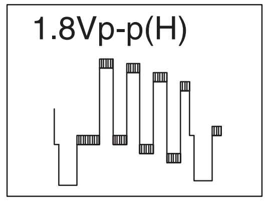
WAVEFORM DIAGRAMS

■ MAIN PWB

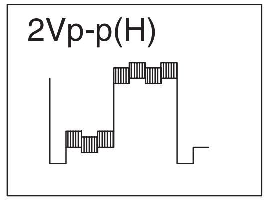
Q600 C



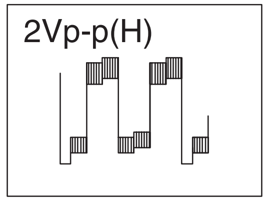
IC200 31pin



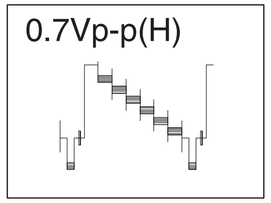
IC200 32pin



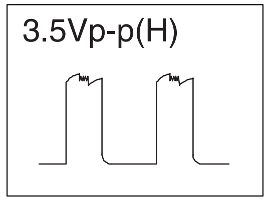
IC200 33pin



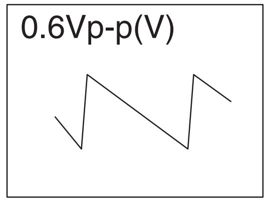
IC200 40pin



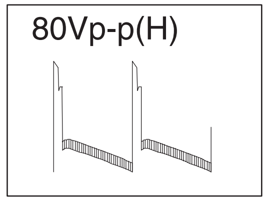
IC200 56pin



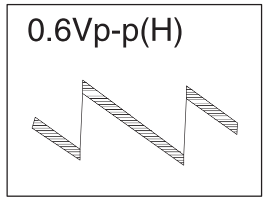
IC600 1pin



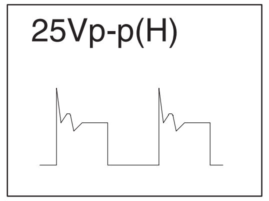
IC600 5pin



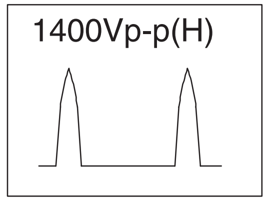
IC600 7pin



Q600 B

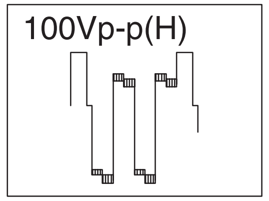


Q602 C

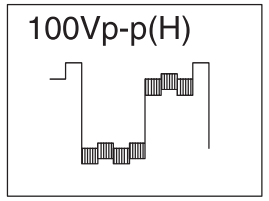


■ CRT SOCKET PWB

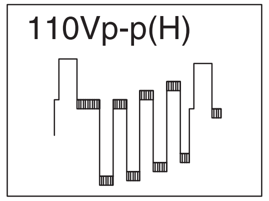
IC900 7pin



IC900 8pin



IC900 9pin



AV29BF10ENS
AV29BF10EPS
AV29BF10EES STANDARD CIRCUIT DIAGRAM

■ NOTE ON USING CIRCUIT DIAGRAMS

1.SAFETY

The components identified by the ⚠ symbol and shading are critical for safety. For continued safety replace safety critical components only with manufactures recommended parts.

2.SPECIFIED VOLTAGE AND WAVEFORM VALUES

The voltage and waveform values have been measured under the following conditions.

(1)Input signal	: Colour bar signal
(2)Setting positions of each knob/button and variable resistor	: Original setting position when shipped
(3)Internal resistance of tester	:DC 20kΩ/V
(4)Oscilloscope sweeping time	:H ⇒ 20µS/div :V ⇒ 5mS/div :Others ⇒ Sweeping time is specified
(5)Voltage values	:All DC voltage values

∗ Since the voltage values of signal circuit vary to some extent according to adjustments, use them as reference values.

3.INDICATIONS ON THE CIRCUIT DIAGRAM

(1)Resistors

● Resistance value

No unit	:[Ω]
K	:[K Ω]
M	:[M Ω]

● Type

No indication	:Carbon resistor
OMR	:Oxide metal film resistor
MFR	:Metal film resistor
MPR	:Metal plate resistor
UNFR	:Uninflammable resistor
FR	:Fusible resistor

∗ Composition resistor 1/2 [W] is specified as 1/2S or Comp.

(2)Capacitors

● Capacitance value

1 or higher	:[pF]
less than 1	:[µF]

● Withstand voltage

No indication	:DC50[V]
Others	:DC withstand voltage [V]
AC indicated	:AC withstand voltage [V]

∗ Electrolytic Capacitors
47/50[Example]:Capacitance value [µF]/withstand voltage[V]

● Type

No indication	:Ceramic capacitor
MM	:Metalized mylar capacitor
PP	:Polypropylene capacitor
MPP	:Metalized polypropylene capacitor
MF	:Metalized film capacitor
TF	:Thin film capacitor
BP	:Bipolar electrolytic capacitor
TAN	:Tantalum capacitor

(3)Coils

No unit	:[µH]
Others	:As specified

4.NOTE FOR REPAIRING SERVICE

This model's power circuit is partly different in the GND. The difference of the GND is shown by the LIVE side GND and the ISOLATED(NEUTRAL) side GND.Therefore, care must be taken for the following points.

(1)Do not touch the LIVE side GND or the LIVE side GND and the ISOLATED(NEUTRAL) side GND simultaneously. If the above caution is not respected, an electric shock may be caused. Therefore, make sure that the power cord is surely removed from the receptacle when, for example, the chassis is pulled out.

(2)Do not short between the LIVE side GND and ISOLATED(NEUTRAL) side GND or never measure with a measuring apparatus measure with a measuring apparatus (oscilloscope, etc.) the LIVE side GND and ISOLATED(NEUTRAL) side GND at the same time. If the above precaution is not respected , a fuse or any parts will be broken.

◇ **Since the circuit diagram is a standard one, the circuit and circuit constants may be subject to change for improvement without any notice.**

NOTE

◇ **Due improvement in performance, some part numbers show in the circuit diagram may not agree with those indicated in the part list.**
When ordering parts, please use the numbers that appear in the Parts List.

Mar. 2002 No. 51936

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PATTERN DIAGRAMS
MAIN PWB PATTERN ---------- 2-17
CRT SOCKET PWB PATTERN ---------- 2-19
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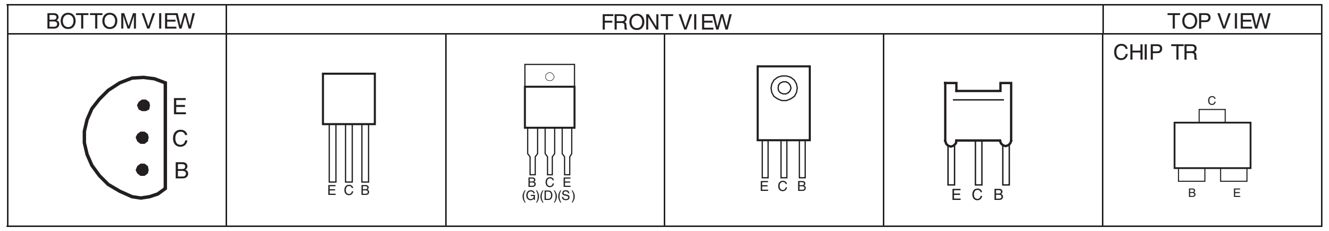
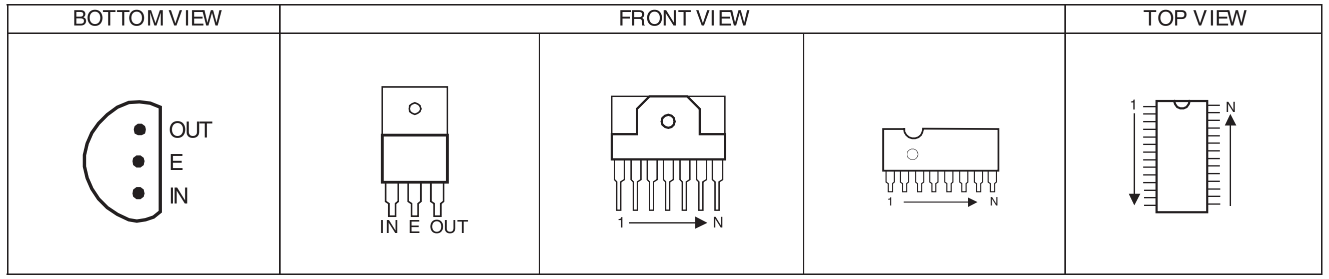
VOLTAGE TABLES ---------- 2-21

SEMICONDUCTOR SHAPES

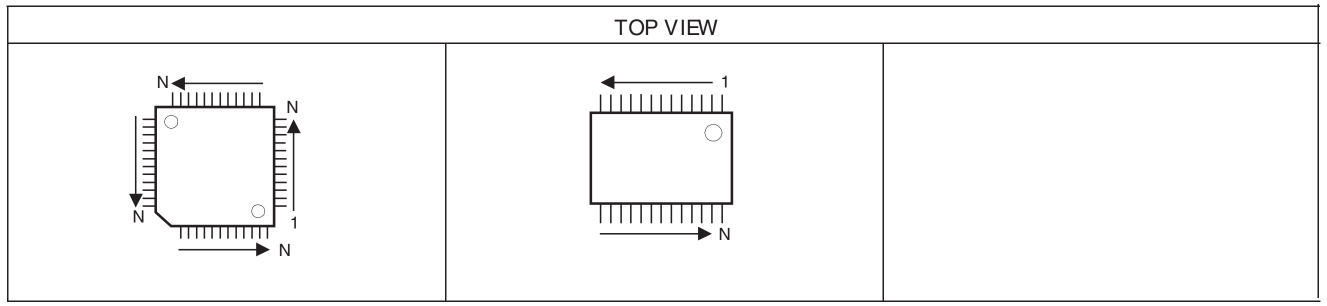
TRANSISTOR


BOTTOM VIEW
FRONT VIEW
TOP VIEW
E
C
B
E C B
B C E
(G)(D)(S)
E C B
E C B
CHIP TR
C
B
E

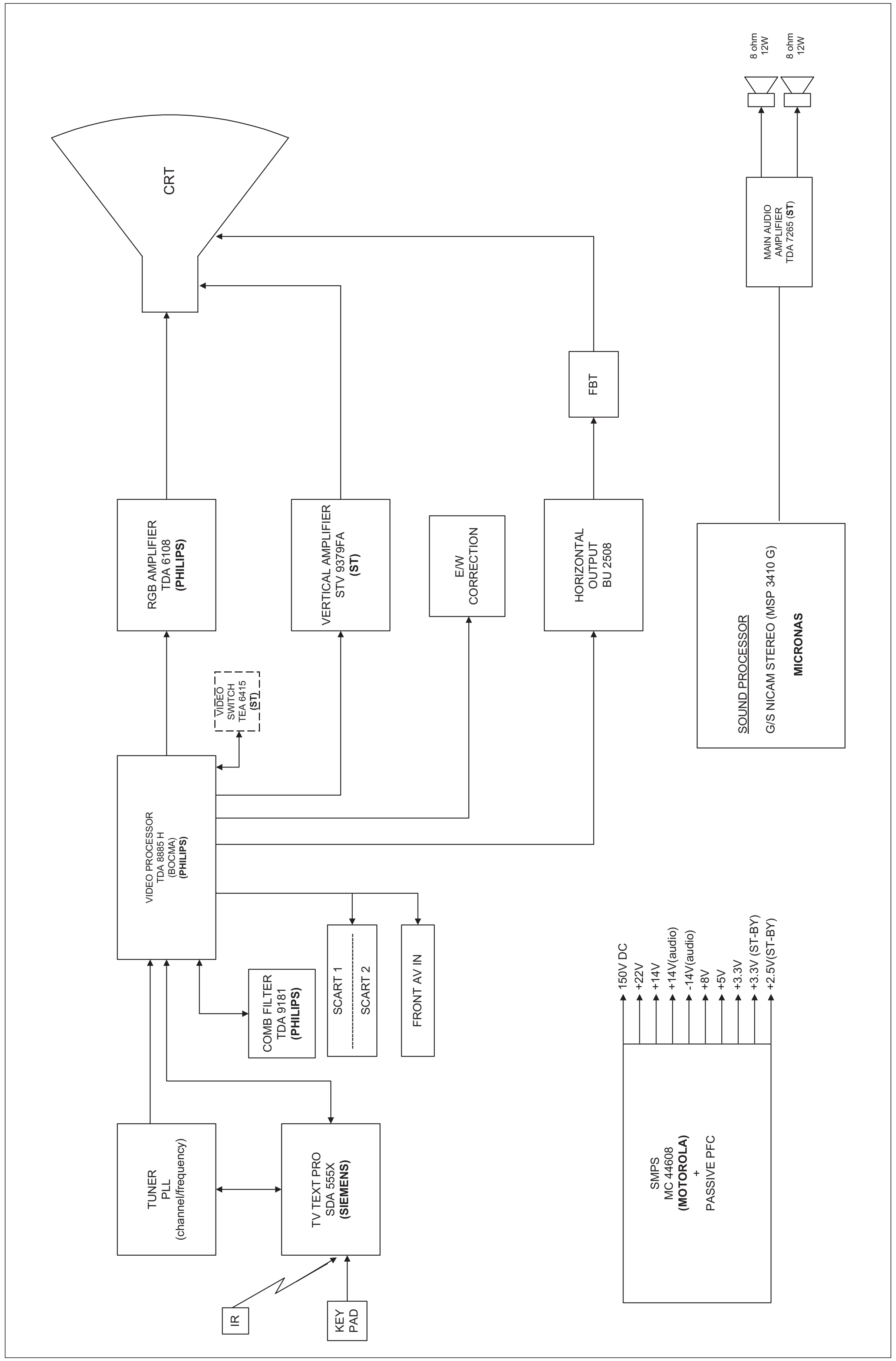
IC


BOTTOM VIEW
FRONT VIEW
TOP VIEW
OUT
E
IN
IN E OUT
1
N
1
N
1
N

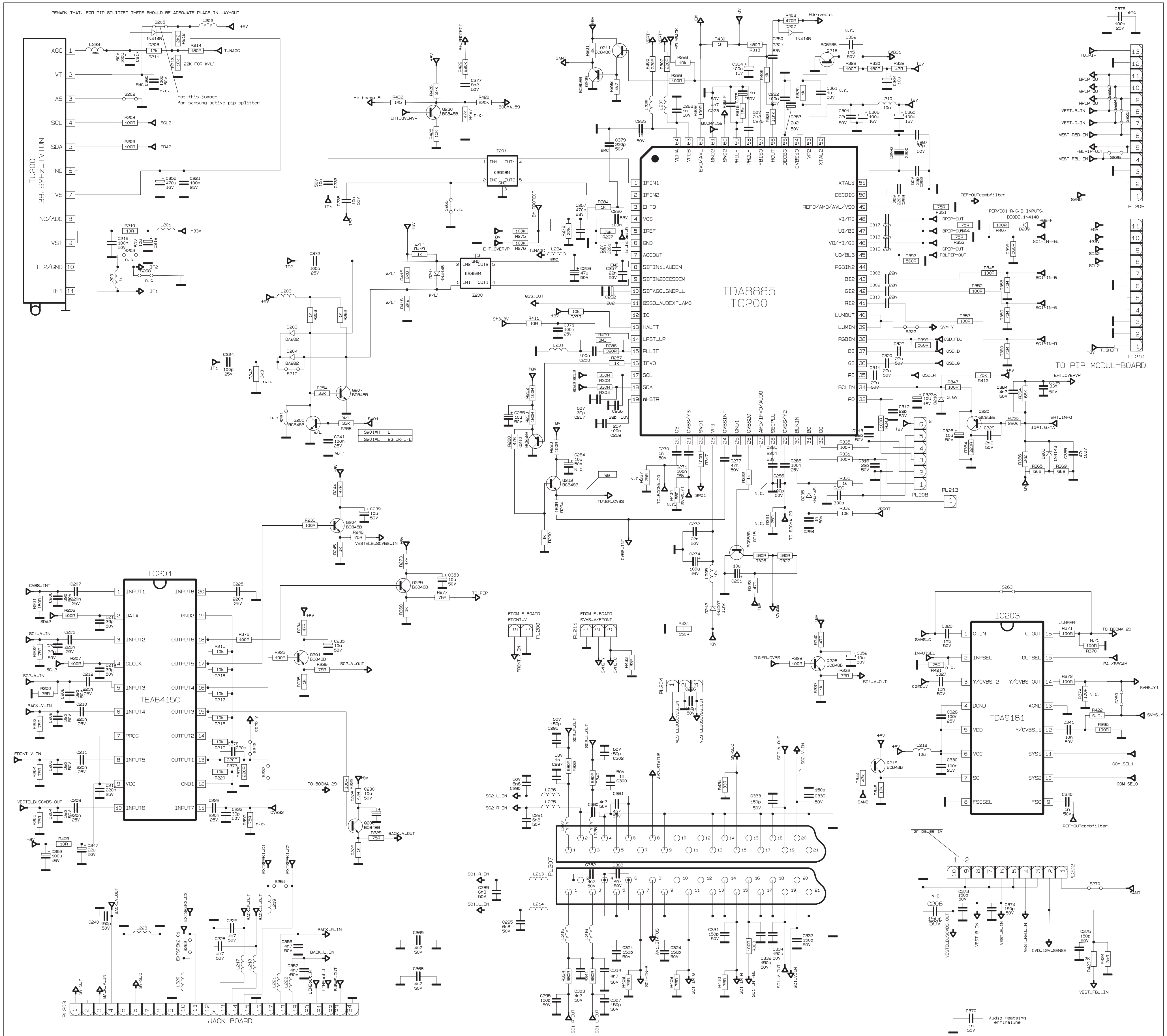
CHIP IC


TOP VIEW
N
N
N
1
N
1
N

BLOCK DIAGRAM


8 ohm 12W
8 ohm 12W
CRT
MAIN AUDIO AMPLIFIER TDA 7265 (ST)
FBT
RGB AMPLIFIER TDA 6108 (PHILIPS)
VERTICAL AMPLIFIER STV 9379FA (ST)
E/W CORRECTION
HORIZONTAL OUTPUT BU 2508
SOUND PROCESSOR G/S NICAM STEREO (MSP 3410 G) MICRONAS
VIDEO SWITCH TEA 6415 (ST)
VIDEO PROCESSOR TDA 8885 H (BOCMA) (PHILIPS)
COMB FILTER TDA 9181 (PHILIPS)
SCART 1
SCART 2
FRONT AV IN
150V DC
+22V
+14V
+14V(audio)
-14V(audio)
+8V
+5V
+3.3V
+3.3V (ST-BY)
+2.5V(ST-BY)
TUNER PLL (channel/frequency)
TV TEXT PRO SDA 555X (SIEMENS)
SMPS MC 44608 (MOTOROLA) + PASSIVE PFC
IR
KEY PAD

CIRCUIT DIAGRAMS *MAIN PWB CIRCUIT DIAGRAM (1/5)*

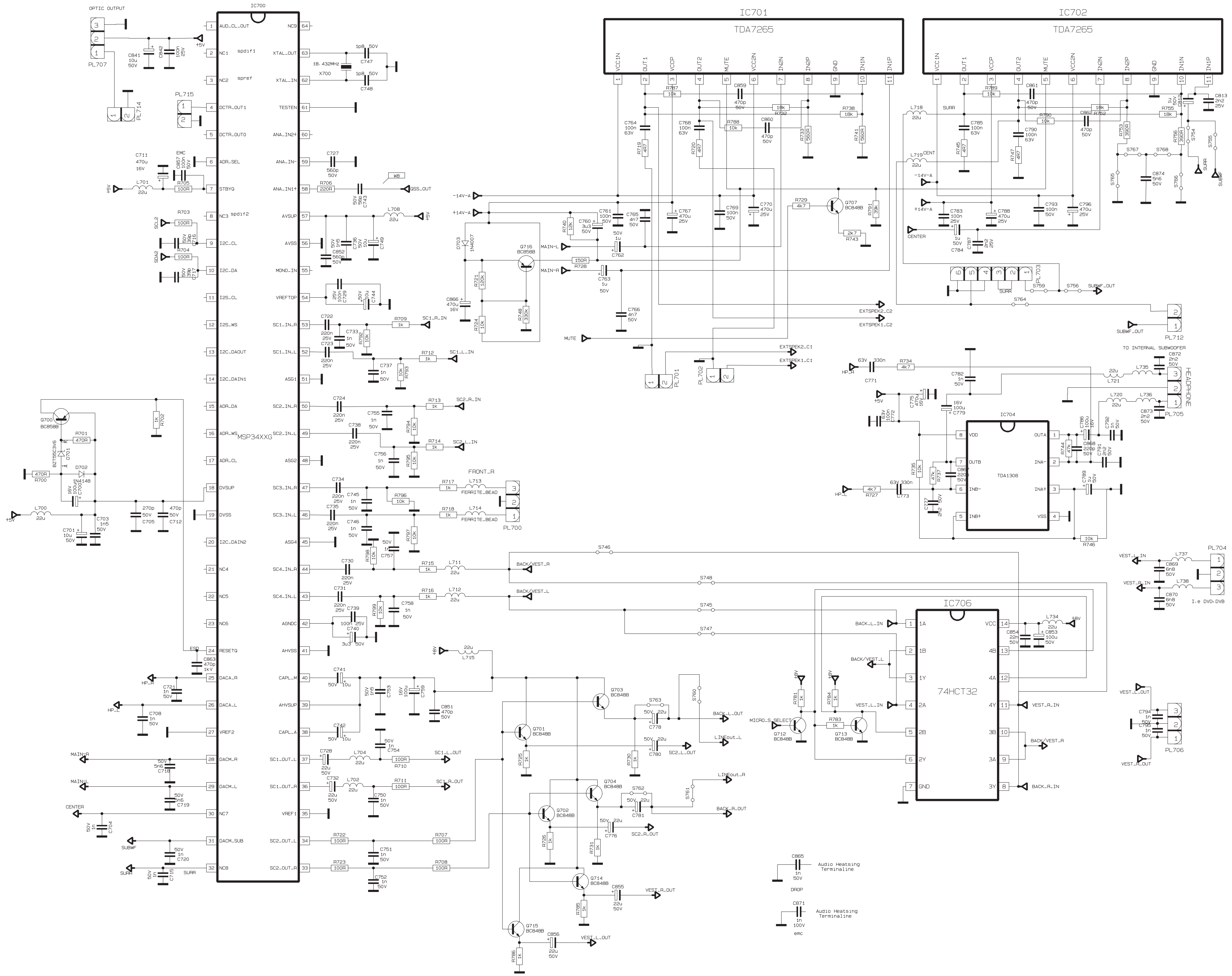

REMARK THAT: FOR PIP SPLITTER THERE SHOULD BE ADEQUATE PLACE IN LAY-OUT
TU200
38.9MHz TVTUN
AGC
VT
AS
SCL
SDA
NC
VS
NC/ADC
VST
IF2/GND
IF1
not:this jumper
for samsung active pip splitter
22K FOR W/L'
TUNAGC
+5V
+33V
Z201
K9358M
Z200
K9356M
TDA8885
IC200
IFIN1
IFIN2
EHTO
VCS
IREF
GND
AGCOUT
SIFIN1_AUDEM
SIFIN2DECSDEM
SIFAGC_SNDPLL
QSSO_AUDEXT_AMO
IC
HALFT
LPST_UP
PLLIF
IFVO
SCL
SDA
WHSTR
XTAL1
DECDIG
REFO/AMO/AVL/VSO
VI/RI
UI/BI
VO/YI/GI
UO/BL3
RGBIN2
BI2
GI2
RI2
LUMOUT
LUMIN
RGBIN
BI
GI
RI
BCLIN
BO
TO PIP MODUL-BOARD
PL209
PL210
PL208
PL213
IC201
TEA6415C
INPUT1
DATA
INPUT2
CLOCK
INPUT3
INPUT4
PROG
INPUT5
VCC
INPUT6
INPUT8
GND2
OUTPUT6
OUTPUT5
OUTPUT4
OUTPUT3
OUTPUT2
OUTPUT1
GND1
INPUT7
IC203
TDA9181
C_IN
INPSEL
Y/CVBS_2
DGND
VDD
VCC
SC
FSCSEL
C_OUT
OUTSEL
Y/CVBS_OUT
AGND
Y/CVBS_1
SYS1
SYS2
FSC
FROM F.BOARD
FRONT_V
SVHS_V/FRONT
PL200
PL211
PL204
PL206
PL207
PL202
PL203
JACK BOARD
for pause tv
Audio Heatsing
Terminaline
SW01=H L'
SW01=L BG.DK.I.L

MAIN PWB VE-20082209(AV29BF10ENS), VE-20083311(AV29BF10EPS), VE-20082155(AV29BF10EES)

DIFFERENCE LIST

	AV29BF10ENS	AV29BF10EPS / EES
C368	CAP CER 4.7NF 50V K B	CAP CER 47NF 50V Z B
J116	KISA DEVRE TEL. 0.6MM	OPEN
CAB2	CABLE 1P R2.6(55CM)	OPEN
C372	CAP SMD 100PF 50V J(0603)	OPEN
C369	CAP SMD 4.7NF 50V K (0603)	CAP SMD 47NF 50V K (0603)
R213	RES SMD 1/16W 10K V (0603)	RES SMD 1/16W 22K J (0603)
Z200	FILTER SAW K9356	FILTER SAW K9356M
L223	FERRITE BEAD ACB2012H-300	OPEN
Z201	FILTER SAW K9358M	FILTER SAW OFWK3953M
J216	KISA DEVRE TEL. 0.6MM	OPEN
J276	KISA DEVRE TEL. 0.6MM	OPEN
C610	OPEN	CAP CER 100PF 50V J CH
R317	OPEN	RES CF 1/4W 100R J
D211	OPEN	DIODE 1N4148 SMD
Q205	OPEN	TR BC848B SMD
A-A	OPEN	CABLE BLACK 1P 12CM
J111	OPEN	KISA DEVRE TEL. 0.6MM
E	OPEN	CABLE 1P R2.6 (35CM)
CAB4	OPEN	CABLE 0.6MM BLUE 2 CM
CAB5	OPEN	CABLE 0.6MM BLUE 2 CM
C379	OPEN	CAP SMD 220PF 50V J (0603)
C380	OPEN	CAP SMD 4.7NF 50V K (0603)
C381	OPEN	CAP SMD 4.7NF 50V K (0603)
C382	OPEN	CAP SMD 4.7NF 50V K (0603)
C383	OPEN	CAP SMD 4.7NF 50V K (0603)
R419	OPEN	RES SMD 1/16W 1KJ (0603)
R418	OPEN	RES SMD 1/16W 2.2KJ (0603)
R268	OPEN	RES SMD 1/16W 33KJ (0603)
R416	OPEN	RES SMD 1/16W 6.8KJ (0603)
S200	OPEN	JUMPER SMD 0603
S201	OPEN	JUMPER SMD 0603
C-C	OPEN	CABLE 1P R2.6 (19CM)
C241	OPEN	CAP SMD 100NF 16V K R (0603)
B-B	OPEN	CABLE 1P R2.6 (16CM)
J305	OPEN	KISA DEVRE TEL. 0.6MM
J306	OPEN	KISA DEVRE TEL. 0.6MM

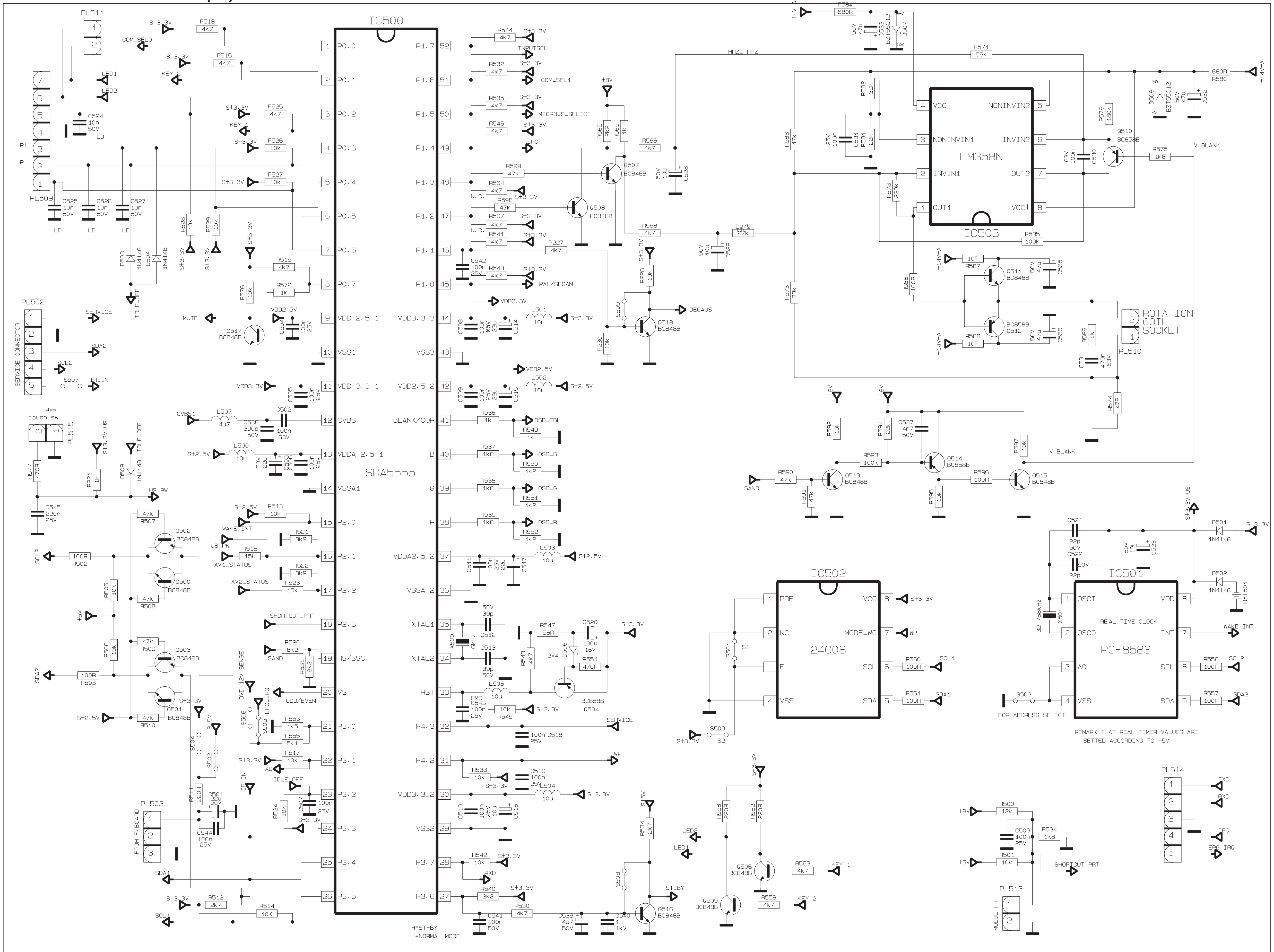
MAIN PWB CIRCUIT DIAGRAM (2/5)


IC700
MSP34XXG
IC701
TDA7265
IC702
TDA7265
IC704
TDA1308
IC706
74HCT32
OPTIC OUTPUT
PL707
PL714
PL715
PL700
PL701
PL702
PL703
PL704
PL705
PL706
PL712
X700
18.432MHz
FRONT_R
FERRITE_BEAD
HEADPHONE
TO INTERNAL SUBWOOFER
I.e DVD-DVB
MAIN-L
MAIN-R
MUTE
CENTER
SURR
SUBWF
SUBWF_OUT
EXTSPEK1_C1
EXTSPEK2_C1
EXTSPEK1_C2
EXTSPEK2_C2
HP_R
HP_L
SC1_R_IN
SC1_L_IN
SC2_R_IN
SC2_L_IN
SC1_L_OUT
SC1_R_OUT
SC2_L_OUT
SC2_R_OUT
QSS_OUT
BACK/VEST_R
BACK/VEST_L
BACK_L_IN
BACK_R_IN
BACK_L_OUT
BACK_R_OUT
VEST_L_IN
VEST_R_IN
VEST_L_OUT
VEST_R_OUT
LINEout_L
LINEout_R
MICRO_S_SELECT
Q700 BC858B
Q701 BC848B
Q702 BC848B
Q703 BC848B
Q704 BC848B
Q707 BC848B
Q712 BC848B
Q713 BC848B
Q714 BC848B
Q715 BC848B
Q716 BC858B
D701 BZT55C3V6
D702 1N4148
D703 1N4007
+5V
+8V
-14V-A
+14V-A
Audio Heatsing Terminaline
DROP
emc

MAIN PWB VE-20082209(AV29BF10ENS), VE-20083311(AV29BF10EPS), VE-20082155(AV29BF10EES)

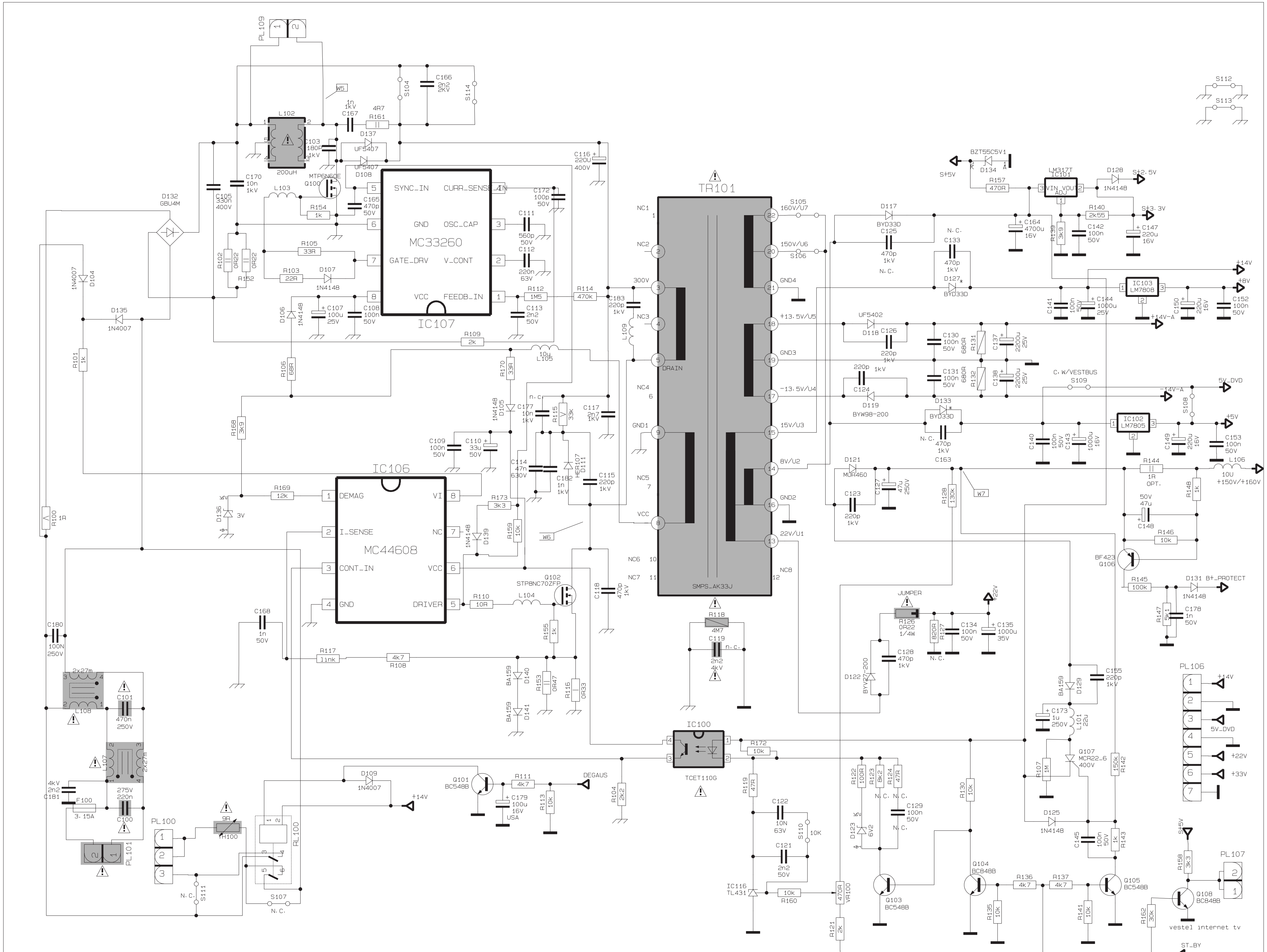
AV29BF10ENS
AV29BF10EPS
AV29BF10EES

MAIN PWB CIRCUIT DIAGRAM (3/5)


IC500
SDA5555
P0.0
P0.1
P0.2
P0.3
P0.4
P0.5
P0.6
P0.7
VDD_2.5_1
VSS1
VDD_3.3_1
CVBS
VDDA_2.5_1
VSSA1
P2.0
P2.1
P2.2
P2.3
HS/SSC
VS
P3.0
P3.1
P3.2
P3.3
P3.4
P3.5
P1.7
P1.6
P1.5
P1.4
P1.3
P1.2
P1.1
P1.0
VDD3.3_3
VSS3
VDD2.5_2
BLANK/COR
B
G
R
VDDA2.5_2
VSSA_2
XTAL1
XTAL2
RST
P4.3
P4.2
VDD3.3_2
VSS2
P3.7
P3.6
IC503
LM358N
VCC-
NONINVIN1
INVIN1
OUT1
NONINVIN2
INVIN2
OUT2
VCC+
IC502
24C08
PRE
NC
E
VSS
VCC
MODE_WC
SCL
SDA
IC501
PCF8583
REAL TIME CLOCK
OSCI
OSCO
A0
VSS
VDD
INT
SCL
SDA
PL511
PL509
PL502
SERVICE CONNECTOR
SERVICE
SDA2
SCL2
IR_IN
PL515
usa
touch sw
PL503
FROM F.BOARD
PL510
ROTATION
COIL
SOCKET
PL514
TXD
RXD
IRQ
EPG_IRQ
PL513
MODUL PRT
COM_SEL0
COM_SEL1
INPUTSEL
MICRO_S_SELECT
PAL/SECAM
MUTE
DEGAUS
HRZ_TRPZ
V_BLANK
SAND
WAKE_INT
US_PW
AV1_STATUS
AV2_STATUS
SHORTCUT_PRT
ODD/EVEN
DVD_12V_SENSE
IDLE_OFF
OSD_FBL
OSD_B
OSD_G
OSD_R
ST_BY
WP
KEY_1
KEY_2
LED1
LED2
FOR ADDRESS SELECT
REMARK THAT REAL TIMER VALUES ARE
SETTED ACCORDING TO +5V
H=ST-BY
L=NORMAL MODE

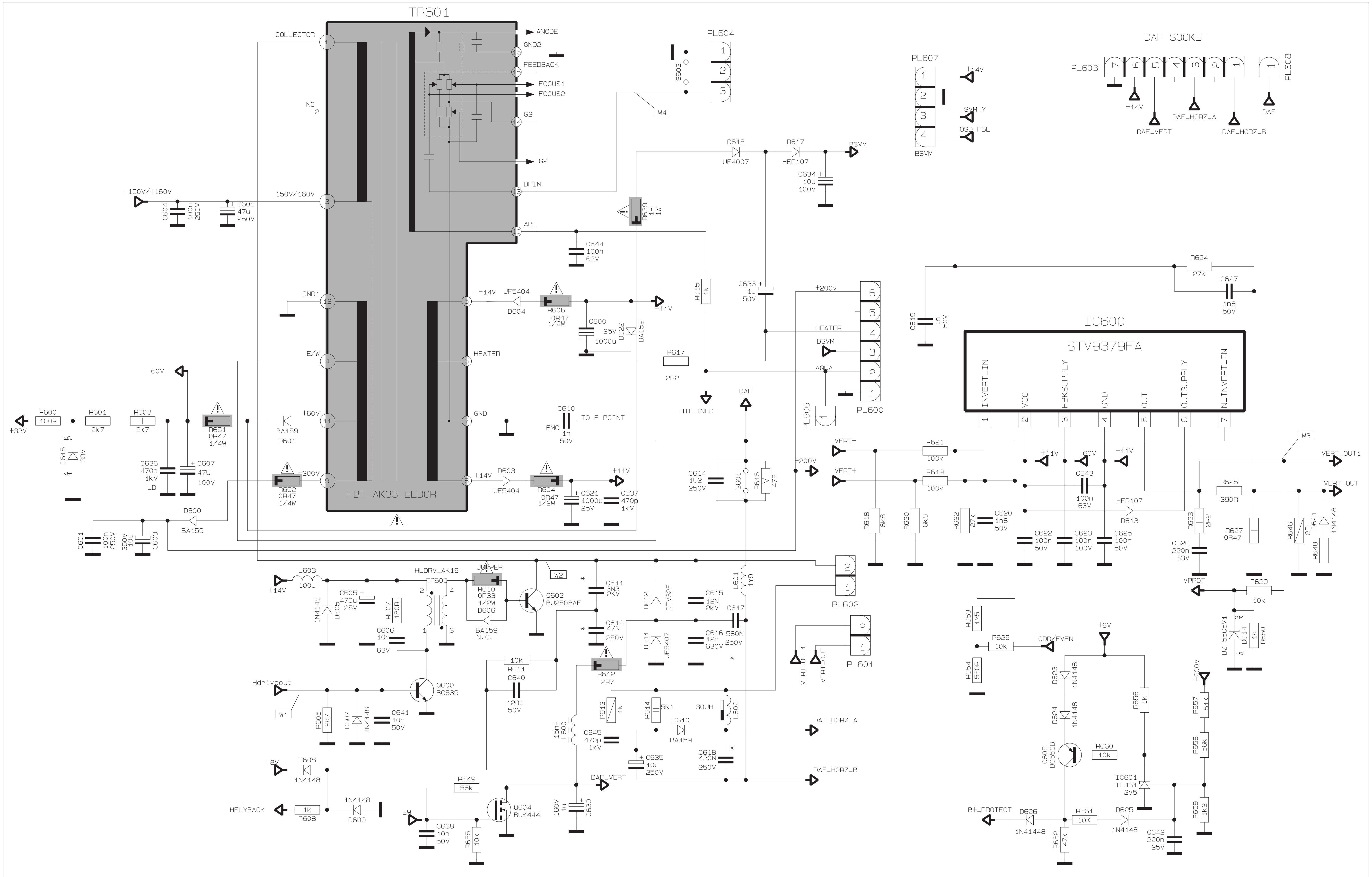
MAIN PWB VE-20082209(AV29BF10ENS), VE-20083311(AV29BF10EPS), VE-20082155(AV29BF10EES)

MAIN PWB CIRCUIT DIAGRAM (4/5)


PL109
L102
200uH
MTP6N60E
Q100
D132
GBU4M
MC33260
IC107
SYNC_IN
CURR_SENSE_IN
GND
OSC_CAP
GATE_DRV
V_CONT
VCC
FEEDB_IN
IC106
MC44608
DEMAG
I_SENSE
CONT_IN
GND
VI
NC
VCC
DRIVER
Q102
STP8NC70ZFP
TR101
SMPS_AK33J
DRAIN
160V/U7
150V/U6
GND4
+13.5V/U5
GND3
-13.5V/U4
15V/U3
8V/U2
GND2
22V/U1
IC100
TCET110G
IC116
TL431
IC101
LM317T
IC103
LM7808
IC102
LM7805
S+5V
S+2.5V
S+3.3V
+14V
+8V
+14V-A
-14V-A
5V_DVD
+5V
+150V/+160V
B+_PROTECT
JUMPER
22V
BF423
Q106
Q107
MCR22_6
Q101
BC548B
Q103
BC548B
Q104
BC848B
Q105
BC548B
Q108
BC848B
DEGAUS
PL100
PL101
PL106
PL107
TH100
F100
3.15A
L108
L107
C.W/VESTBUS
vestel internet tv
ST_BY

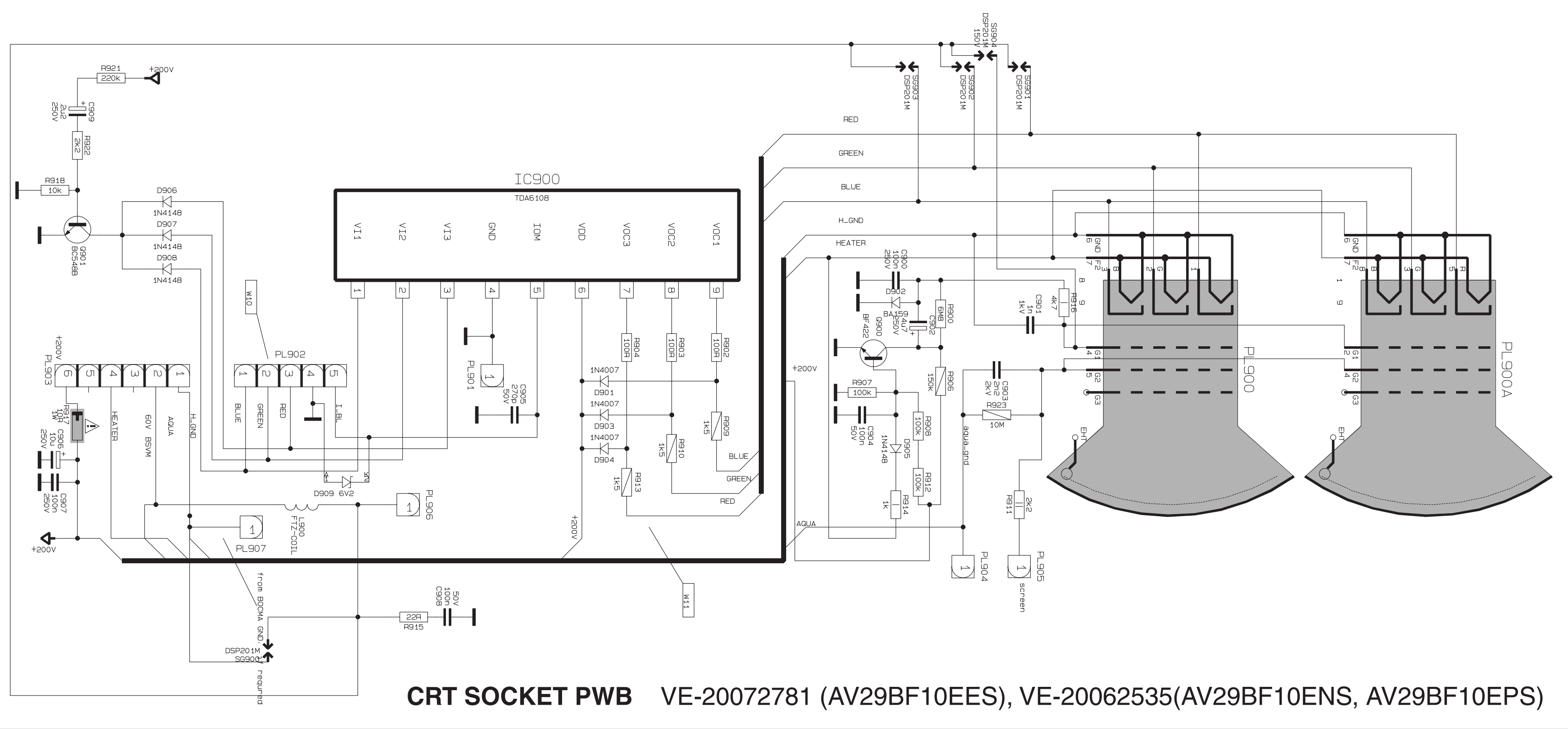
MAIN PWB VE-20082209(AV29BF10ENS), VE-20083311(AV29BF10EPS), VE-20082155(AV29BF10EES)

MAIN PWB CIRCUIT DIAGRAM (5/5)

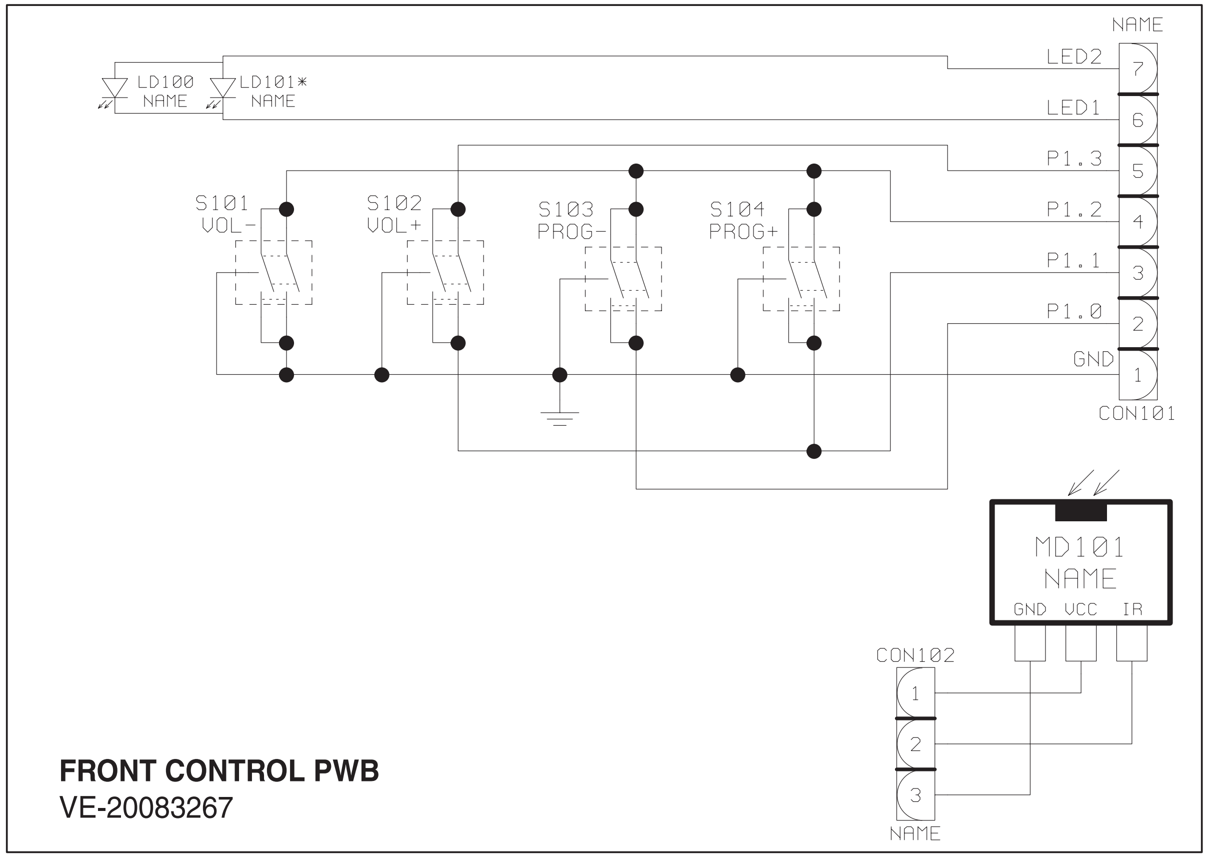

TR601
FBT_AK33_ELDOR
COLLECTOR
ANODE
GND2
FEEDBACK
FOCUS1
FOCUS2
G2
DFIN
ABL
NC
150V/160V
GND1
E/W
HEATER
GND
+60V
+200V
-14V
+14V
+150V/+160V
C604 100n 250V
C608 47u 250V
PL604
S602
W4
PL607
+14V
SVM_Y
OSD_FBL
BSVM
DAF SOCKET
PL603
PL608
DAF
DAF_VERT
DAF_HORZ_A
DAF_HORZ_B
D618 UF4007
D617 HER107
C634 10u 100V
R639 1R 1W
C644 100n 63V
R615 1k
C633 1u 50V
UF5404 D604
R606 0R47 1/2W
C600 25V 1000u
D622 BA159
+11V
R617 2R2
EHT_INFO
PL600
PL606
AQUA
R624 27k
C627 1n8 50V
C619 1n 50V
IC600
STV9379FA
INVERT_IN
VCC
FBKSUPPLY
GND
OUT
OUTSUPPLY
N_INVERT_IN
60V
R600 100R
R601 2k7
R603 2k7
R651 0R47 1/4W
BA159 D601
C610 1n 50V
EMC
TO E POINT
+33V
D615 33V
C636 470p 1kV LD
C607 47U 100V
R652 0R47 1/4W
D603 UF5404
R604 0R47 1/2W
C621 1000u 25V
C637 470p 1kV
D600 BA159
C601 100n 250V
C603 10u 350V
C614 1U2 250V
S601
R616 47R
VERT-
VERT+
R621 100k
R619 100k
-11V
C643 100n 63V
HER107 D613
W3
VERT_OUT1
VERT_OUT
R625 390R
R618 6k8
R620 6k8
R622 27k
C620 1n8 50V
C622 100n 50V
C623 100n 100V
C625 100n 50V
R623 2R2
C626 220n 63V
R627 0R47
R646 2R
D621 1N4148
R648
L603 100u
+14V
C605 470u 25V
HLDRV_AK19
TR600
JUMPER
R610 0R33 1/2W
D606 BA159 N.C.
Q602 BU2508AF
W2
C611 3N3 2KV
C612 47N 250V
D612 DTV32F
D611 UF5407
C615 12N 2kV
C616 12n 630V
C617 560N 250V
L601 1m9
PL602
D605 1N4148
R607 180R
C606 10n 63V
R611 10k
C640 120p 50V
R612 2R7
Hdriveout
W1
Q600 BC639
R605 2k7
D607 1N4148
C641 10n 50V
R613 1k
R614 5K1
D610 BA159
30UH
L602
L600 15mH
C645 470p 1kV
C635 10u 250V
C618 430N 250V
+8V
D608 1N4148
R649 56k
HFLYBACK
R608 1k
1N4148 D609
EW
C638 10n 50V
Q604 BUK444
R655 10k
C639 1u 160V
PL601
VPROT
R629 10k
BZT55C5V1
D614
R650 1k
R653 1M5
R626 10k
ODD/EVEN
R654 560R
D623 1N4148
D624 1N4148
Q605 BC558B
R660 10k
R656 1k
IC601 TL431 2V5
+200V
R657 51k
R658 56k
R659 1k2
B+_PROTECT
D626 1N4144B
R661 10K
D625 1N4148
C642 220n 25V
R662 47k

MAIN PWB VE-20082209(AV29BF10ENS), VE-20083311(AV29BF10EPS), VE-20082155(AV29BF10EES)

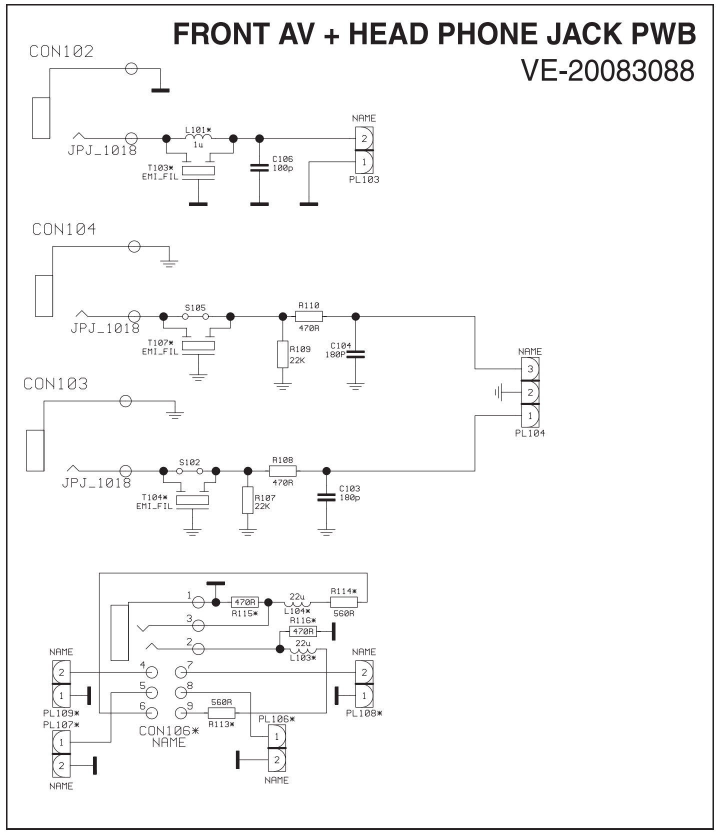
CRT SOCKET PWB CIRCUIT DIAGRAM


IC900
TDA6108
VI1
VI2
VI3
GND
IOM
VDD
VOC3
VOC2
VOC1
PL900
PL900A
PL901
PL902
PL903
PL904
PL905
PL906
PL907
R921 220k
R922 2k2
R918 10k
C909 2u2 250V
Q901 BC548B
D906 1N4148
D907 1N4148
D908 1N4148
D901 1N4007
D903 1N4007
D904
D909 6V2
R902 100R
R903 100R
R904 100R
R909 1k5
R910 1k5
R913 1k5
R907 100k
R915 22R
R923 10M
R911 2k2
R916 4k7
L900 F72-COIL
SG900
SG901 DSP201M
SG902 DSP201M
SG903 DSP201M
SG904 DSP201M
+200V
RED
GREEN
BLUE
H_GND
HEATER
AQUA
60V BSVM
W10
W11
from BOCMA GND
required
screen
aqua_gnd
CRT SOCKET PWB   VE-20072781 (AV29BF10EES), VE-20062535(AV29BF10ENS, AV29BF10EPS)

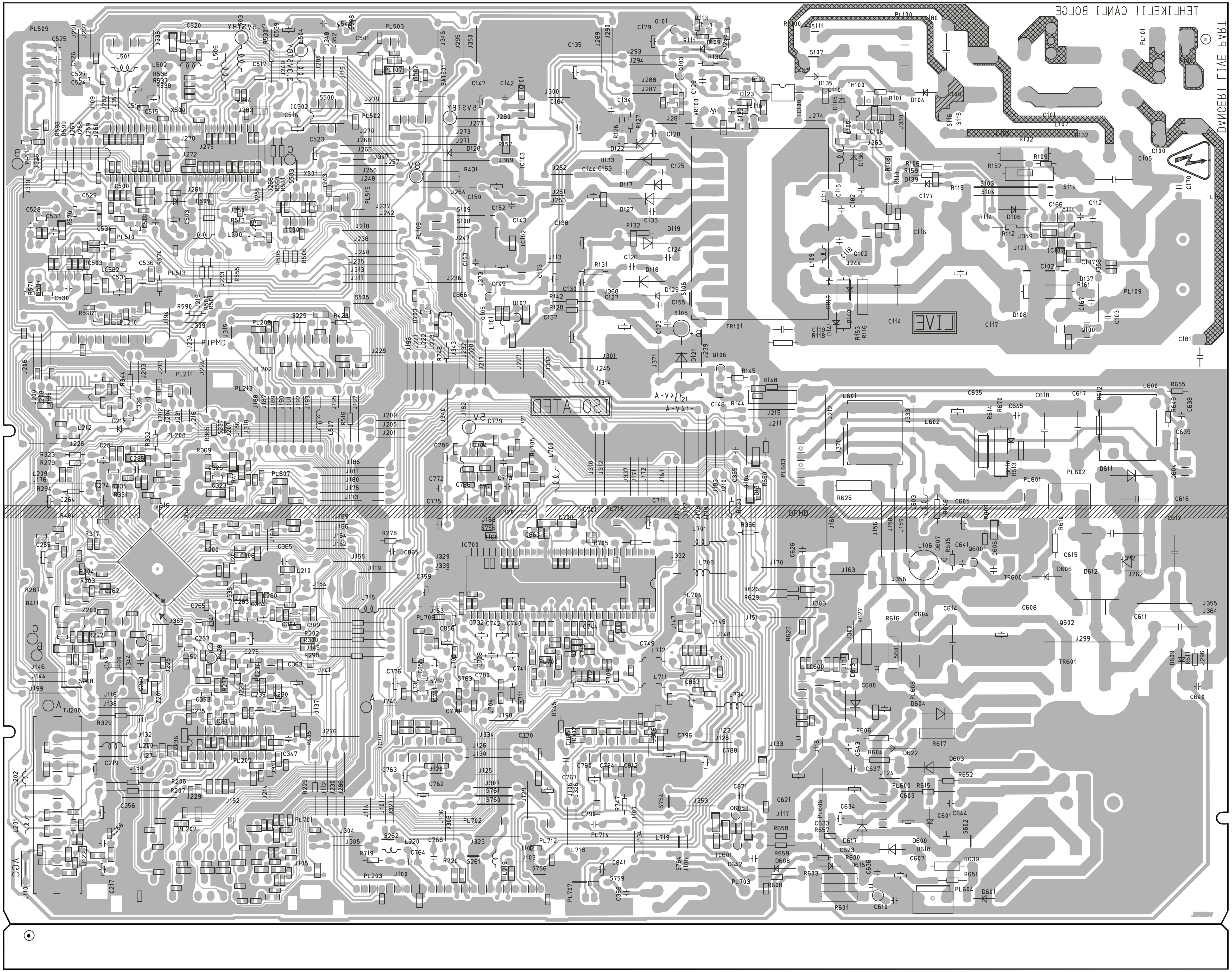
FRONT CONTROL PWB CIRCUIT DIAGRAM


NAME
LED2
LED1
P1.3
P1.2
P1.1
P1.0
GND
7
6
5
4
3
2
1
CON101
LD100 NAME
LD101* NAME
S101 VOL-
S102 VOL+
S103 PROG-
S104 PROG+
MD101 NAME
GND VCC IR
CON102
1
2
3
NAME
FRONT CONTROL PWB
VE-20083267

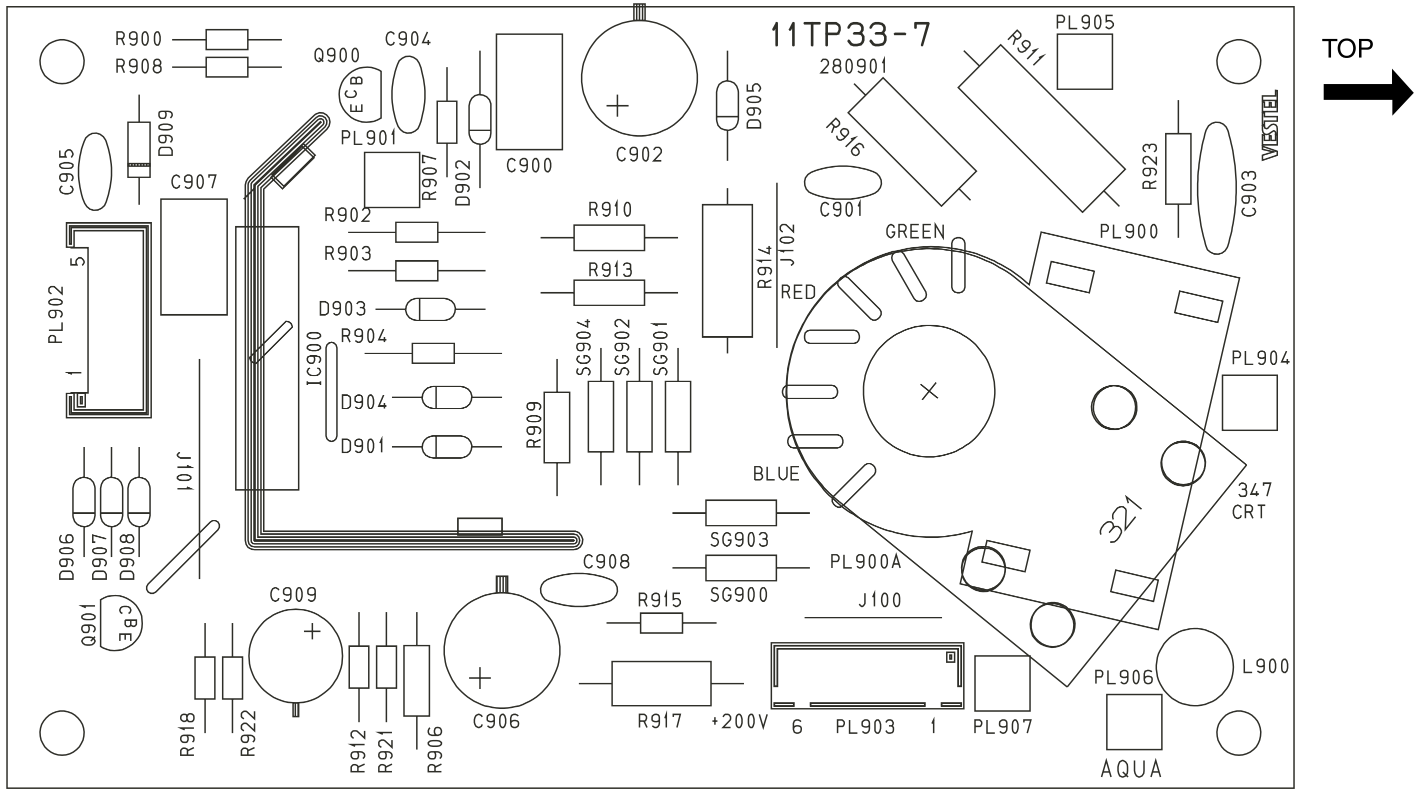
FRONT AV + HEADPHONE JACK PWB CIRCUIT DIAGRAM


FRONT AV + HEAD PHONE JACK PWB
VE-20083088
CON102
JPJ_1018
L101* 1u
T103* EMI_FIL
C106 100p
NAME
PL103
CON104
JPJ_1018
S105
T107* EMI_FIL
R110 470R
R109 22K
C104 100P
CON103
JPJ_1018
S102
T104* EMI_FIL
R108 470R
R107 22K
C103 100p
NAME
PL104
R115* 470R
L104* 22u
R114* 560R
R116* 470R
L103* 22u
R113* 560R
PL105*
PL107*
PL106*
PL108*
CON106* NAME

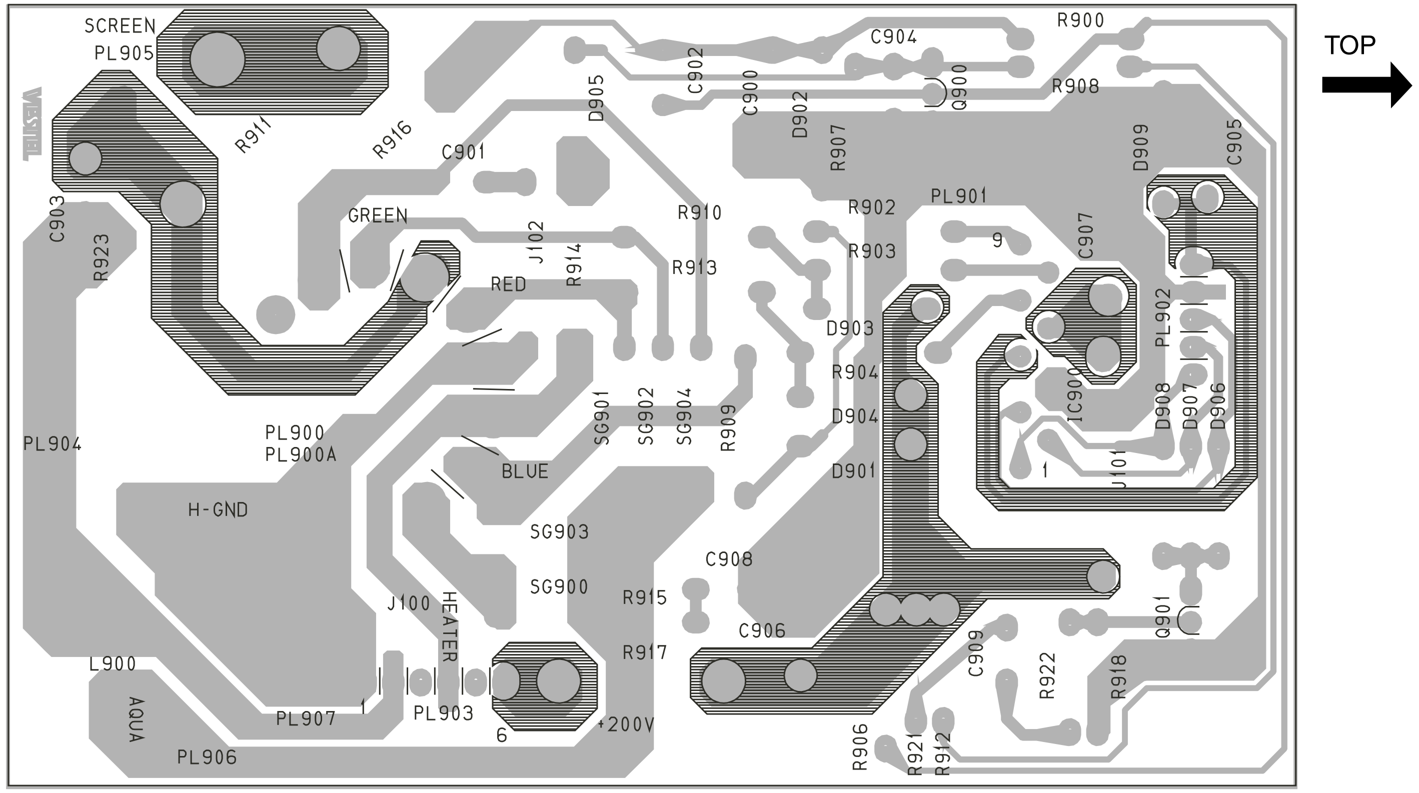
PATTERN DIAGRAMS *MAIN PWB PATTERN (PARTS SIDE)*


TEHLIKELI! CANLI BOLGE
DANGER! LIVE PART
LIVE
ISOLATED
PL509
PL503
PL100
PL101
IC500
IC502
IC700
IC100
TR101
TR600
TR601
TU200
X500
X200

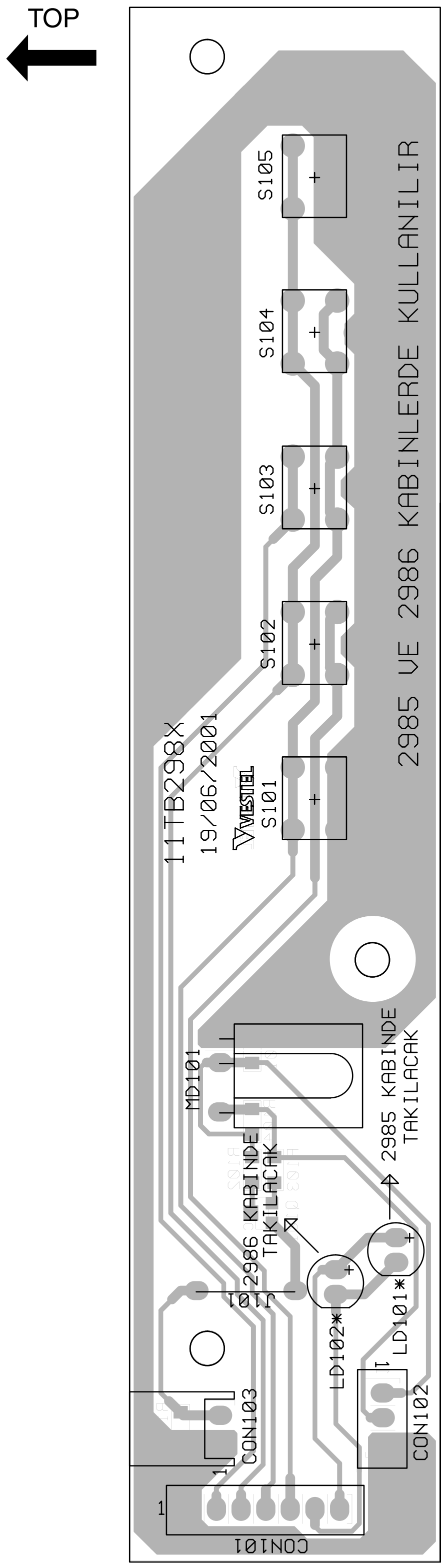
CRT SOCKET PWB PATTERN (PARTS SIDE)


TOP
11TP33-7
280901
VESTEL
R900
R908
Q900
C904
ECB
PL901
D909
C905
C907
PL902
5
1
R902
R903
D903
R904
D904
D901
IC900
J101
D906
D907
D908
Q901
CBE
C909
R918
R922
R912
R921
R906
C906
R907
D902
C900
C902
D905
R910
R913
R914
J102
RED
GREEN
BLUE
C901
R916
R911
PL905
R923
C903
PL900
PL904
SG904
SG902
SG901
R909
SG903
SG900
C908
R915
PL900A
J100
R917
+200V
6
PL903
1
PL907
PL906
L900
AQUA
347
CRT
321

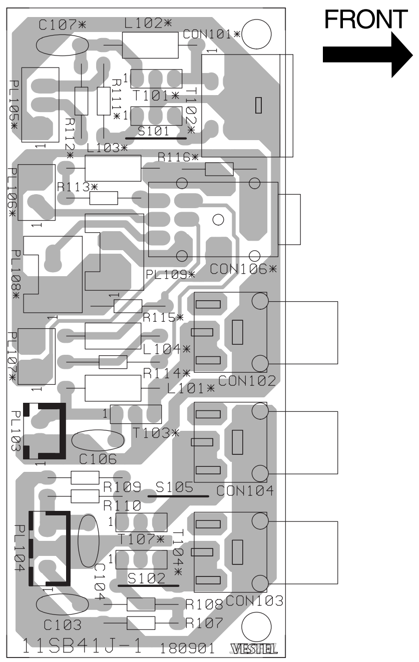
CRT SOCKET PWB PATTERN (SOLDER SIDE)


TOP
VESTEL
SCREEN
PL905
R911
R916
C901
D905
C902
C900
D902
R907
C904
Q900
R900
R908
D909
C905
C903
R923
GREEN
J102
R914
RED
R910
R913
R902
R903
PL901
9
C907
PL902
D903
R904
D904
D901
IC900
D908
D907
D906
J101
1
PL904
PL900
PL900A
H-GND
BLUE
SG901
SG902
SG904
R909
SG903
SG900
C908
R915
R917
C906
C909
R922
R918
Q901
J100
HEATER
L900
AQUA
PL907
PL903
6
+200V
PL906
R906
R921
R912

FRONT CONTROL PWB PATTERN (PARTS SIDE)


TOP
S105
S104
S103
S102
S101
2985 VE 2986 KABINLERDE KULLANILIR
11TB298X
19/06/2001
VESTEL
MD101
2986 KABINDE TAKILACAK
2985 KABINDE TAKILACAK
J101
LD102*
LD101*
CON103
CON102
CON101
1

FRONT AV + HEADPHONE JACK PWB PATTERN (PARTS SIDE)


FRONT
C107*
L102*
CON101*
PL105*
R111*
R112*
T101*
T102*
S101
L103*
R116*
R113*
PL106*
PL108*
PL109*
CON106*
R115*
L104*
R114*
L101*
CON102
PL107*
PL103
T103*
C106
R109
S105
R110
CON104
PL104
T107*
T104*
C104*
S102
R108
CON103
C103
R107
11SB41J-1
180901
VESTEL

VOLTAGE TABLES

■ MAIN PWB

IC100

PIN NO.	VOLTAGE
1	8.4
2	7.3
3	4.9
4	13.7

IC101

PIN NO.	VOLTAGE
1	2.0
2	3.3
3	8.4

IC102

PIN NO.	VOLTAGE
1	8.3
2	0
3	4.9

IC103

PIN NO.	VOLTAGE
1	14.6
2	0
3	7.8

IC106

PIN NO.	VOLTAGE	PIN NO.	VOLTAGE
1	1.0	5	1.9
2	0	6	13.7
3	4.9	7	0
4	0	8	188.1

IC107

PIN NO.	VOLTAGE	PIN NO.	VOLTAGE
1	2.6	5	1.0
2	1.4	6	0
3	0.1	7	1.3
4	0	8	13.6

IC200

PIN NO.	VOLTAGE	PIN NO.	VOLTAGE
1	1.8	33	2.6
2	1.8	34	2.9
3	2.1	35	3.3
4	3.6	36	3.7
5	3.8	37	3.3
6	0	38	0.1
7	2.4	39	3.3
8	1.8	40	3.2
9	1.8	41	0
10	2.5	42	0
11	3.0	43	0
12	7.2	44	0
13	3.3	45	0
14	2.3	46	2.5
15	3.0	47	0
16	4.6	48	0
17	4.5	49	3.9
18	3.8	50	4.9
19	0	51	1.5
20	1.2	52	1.5
21	3.6	53	7.8
22	2	54	2.8
23	7.0	55	3.9
24	3.6	56	1.6
25	0	57	0.3
26	2.8	58	2.8
27	2.8	59	3.8
28	2.2	60	0
29	3.7	61	0
30	5.4	62	2.9
31	2.7	63	2.4
32	2.7	64	2.4

IC201

PIN NO.	VOLTAGE	PIN NO.	VOLTAGE
1	3.1	11	3.0
2	4.5	12	0
3	2.7	13	2.7
4	4.5	14	2.8
5	2.7	15	2.0
6	3.6	16	2.0
7	7.5	17	2.8
8	2.7	18	2.8
9	7.5	19	0
10	3.6	20	2.7

IC203

PIN NO.	VOLTAGE	PIN NO.	VOLTAGE
1	1.4	9	0
2	0	10	0.7
3	1.5	11	4.9
4	0	12	4.9
5	1.3	13	0
6	0	14	1.5
7	2.9	15	3.2
8	0.6	16	0.8

IC500

PIN NO.	VOLTAGE	PIN NO.	VOLTAGE
1	3.2	27	0
2	0	28	3.2
3	1.9	29	0
4	3.2	30	3.2
5	3.2	31	3.2
6	3.2	32	3.2
7	3.2	33	3.2
8	0	34	0.4
9	2.4	35	0.5
10	0	36	0
11	3.3	37	2.4
12	0.8	38	0.3
13	2.4	39	0.2
14	0	40	0.1
15	2.4	41	0.2
16	0	42	2.4
17	0	43	0
18	1.5	44	3.2
19	0.6	45	0
20	1.1	46	0
21	3.2	47	1.0
22	3.2	48	1.3
23	3.2	49	3.2
24	3.6	50	3.2
25	3.0	51	0
26	3.0	52	3.2

IC502

PIN NO.	VOLTAGE	PIN NO.	VOLTAGE
1	0	5	3.0
2	0	6	3.0
3	0	7	3.2
4	0	8	3.2

IC503

PIN NO.	VOLTAGE	PIN NO.	VOLTAGE
1	3.1	5	4.2
2	4.2	6	4.2
3	4.2	7	3.0
4	-12.1	8	12.0

IC600

PIN NO.	VOLTAGE	PIN NO.	VOLTAGE
1	0	5	0.4
2	0	6	15.4
3	0	7	7.5
4	0		

IC700

PIN NO.	VOLTAGE	PIN NO.	VOLTAGE
1	2.4	33	3.6
2	0	34	3.6
3	0	35	0
4	4.9	36	3.6
5	0	37	3.6
6	0	38	6.8
7	4.9	39	7.8
8	0	40	6.8
9	4.5	41	0
10	4.5	42	3.6
11	2.4	43	3.6
12	2.4	44	3.6
13	2.4	45	0
14	1.3	46	3.6
15	1.3	47	3.6
16	1.3	48	0
17	1.3	49	3.6
18	4.9	50	3.6
19	0	51	0
20	1.3	52	3.6
21	0	53	3.6
22	0	54	2.5
23	0	55	NC
24	4.8	56	0
25	0	57	4.9
26	0	58	1.4
27	0	59	1.4
28	0	60	NC
29	0	61	0
30	0	62	2.3
31	0	63	2.2
32	0	64	NC

IC701

PIN NO.	VOLTAGE	PIN NO.	VOLTAGE
1	-15.0	7	0
2	-0.2	8	0
3	14.8	9	0
4	-0.1	10	0
5	2.4	11	0
6	-15.0		

IC704

PIN NO.	VOLTAGE	PIN NO.	VOLTAGE
1	2.4	5	2.4
2	2.4	6	2.4
3	2.4	7	2.4
4	0	8	4.9

	E (D)	C (S)	B (G)
Q100	237	0	1.2
Q101	0	14.6	0
Q102	410	0	1.9
Q103	0	1.3	0
Q104	0	0	0.6
Q105	0	0	0.6
Q106	147.3	146.9	0
Q107	7.8	8.4	163.8
Q200	1.4	7.7	2.0
Q209	1.3	0	0.6
Q210	3.6	0	2.9
Q211	0.6	7.8	0.3
Q212	2.7	0	0
Q215	3.4	0	2.8
Q216	3.4	0	2.8
Q218	0.7	7.8	1.3
Q228	2.2	7.7	2.7
Q229	1.4	7.7	2
Q500	4.6	3.0	2.2
Q501	4.6	3.0	2.3
Q502	3.0	4.6	2.2
Q503	3.1	4.6	2.3
Q504	3.2	3.2	2.6
Q505	0	2.0	0
Q506	0	0.1	0.7
Q507	0	3.3	0.5
Q508	0	2.5	0.5
Q510	4.2	3.0	7.6
Q511	2.5	14.8	3.2
Q512	2.5	-15.0	3.2
Q513	0	5.7	0.3
Q514	0	7.8	7.5
Q515	0	7.5	0
Q516	0	2.6	0
Q517	0	3.1	0
Q600	0	0	14.1
Q602	0	-158.5	-0.1
Q604	0	32.8	2.9
Q605	7.5	0	7.5
Q700	4.9	4.8	4.1
Q701	3.0	7.8	3.6
Q701	3.0	7.8	3.6
Q703	3.0	7.8	3.6
Q704	3.0	7.8	3.6
Q707	2.4	2.4	3.0
Q716	14.9	2.4	14.9

■ CRT SOCKET PWB

IC900

PIN NO.	VOLTAGE	PIN NO.	VOLTAGE
1	2.7	6	199
2	2.7	7	116
3	3.6	8	111.5
4	0	9	111.9
5	5.6		

	E(D)	C(S)	B(G)
Q100	237	0	1.2
Q101	0	14.6	0

IC600

PIN NO.	VOLTAGE	PIN NO.	VOLTAGE
1	0	5	0.4
2	0	6	15.4
3	0	7	7.5
4	0		

IC700

PIN NO.	VOLTAGE	PIN NO.	VOLTAGE
1	2.4	33	3.6
2	0	34	3.6
3	0	35	0
4	4.9	36	3.6
5	0	37	3.6
6	0	38	6.8
7	4.9	39	7.8
8	0	40	6.8
9	4.5	41	0
10	4.5	42	3.6
11	2.4	43	3.6
12	2.4	44	3.6
13	2.4	45	0
14	1.3	46	3.6
15	1.3	47	3.6
16	1.3	48	0
17	1.3	49	3.6
18	4.9	50	3.6
19	0	51	0
20	1.3	52	3.6
21	0	53	3.6
22	0	54	2.5
23	0	55	NC
24	4.8	56	0
25	0	57	4.9
26	0	58	1.4
27	0	59	1.4
28	0	60	NC
29	0	61	0
30	0	62	2.3
31	0	63	2.2
32	0	64	NC

IC701

PIN NO.	VOLTAGE	PIN NO.	VOLTAGE
1	-15.0	7	0
2	-0.2	8	0
3	14.8	9	0
4	-0.1	10	0
5	2.4	11	0
6	-15.0		

IC704

PIN NO.	VOLTAGE	PIN NO.	VOLTAGE
1	2.4	5	2.4
2	2.4	6	2.4
3	2.4	7	2.4
4	0	8	4.9

	E (D)	C (S)	B (G)
Q100	237	0	1.2
Q101	0	14.6	0
Q102	410	0	1.9
Q103	0	1.3	0
Q104	0	0	0.6
Q105	0	0	0.6
Q106	147.3	146.9	0
Q107	7.8	8.4	163.8
Q200	1.4	7.7	2.0
Q209	1.3	0	0.6
Q210	3.6	0	2.9
Q211	0.6	7.8	0.3
Q212	2.7	0	0
Q215	3.4	0	2.8
Q216	3.4	0	2.8
Q218	0.7	7.8	1.3
Q228	2.2	7.7	2.7
Q229	1.4	7.7	2
Q500	4.6	3.0	2.2
Q501	4.6	3.0	2.3
Q502	3.0	4.6	2.2
Q503	3.1	4.6	2.3
Q504	3.2	3.2	2.6
Q505	0	2.0	0
Q506	0	0.1	0.7
Q507	0	3.3	0.5
Q508	0	2.5	0.5
Q510	4.2	3.0	7.6
Q511	2.5	14.8	3.2
Q512	2.5	-15.0	3.2
Q513	0	5.7	0.3
Q514	0	7.8	7.5
Q515	0	7.5	0
Q516	0	2.6	0
Q517	0	3.1	0
Q600	0	0	14.1
Q602	0	-158.5	-0.1
Q604	0	32.8	2.9
Q605	7.5	0	7.5
Q700	4.9	4.8	4.1
Q701	3.0	7.8	3.6
Q701	3.0	7.8	3.6
Q703	3.0	7.8	3.6
Q704	3.0	7.8	3.6
Q707	2.4	2.4	3.0
Q716	14.9	2.4	14.9

■ CRT SOCKET PWB

IC900

PIN NO.	VOLTAGE	PIN NO.	VOLTAGE
1	2.7	6	199
2	2.7	7	116
3	3.6	8	111.5
4	0	9	111.9
5	5.6		

	E(D)	C(S)	B(G)
Q100	237	0	1.2
Q101	0	14.6	0

■ MAIN PWB

IC100

PIN NO.	VOLTAGE
1	8.4
2	7.3
3	4.9
4	13.7

IC101

PIN NO.	VOLTAGE
1	2.0
2	3.3
3	8.4

IC102

PIN NO.	VOLTAGE
1	8.3
2	0
3	4.9

IC103

PIN NO.	VOLTAGE
1	14.6
2	0
3	7.8

IC106

PIN NO.	VOLTAGE	PIN NO.	VOLTAGE
1	1.0	5	1.9
2	0	6	13.7
3	4.9	7	0
4	0	8	188.1

IC107

PIN NO.	VOLTAGE	PIN NO.	VOLTAGE
1	2.6	5	1.0
2	1.4	6	0
3	0.1	7	1.3
4	0	8	13.6

IC200

PIN NO.	VOLTAGE	PIN NO.	VOLTAGE
1	1.8	33	2.6
2	1.8	34	2.9
3	2.1	35	3.3
4	3.6	36	3.7
5	3.8	37	3.3
6	0	38	0.1
7	2.4	39	3.3
8	1.8	40	3.2
9	1.8	41	0
10	2.5	42	0
11	3.0	43	0
12	7.2	44	0
13	3.3	45	0
14	2.3	46	2.5
15	3.0	47	0
16	4.6	48	0
17	4.5	49	3.9
18	3.8	50	4.9
19	0	51	1.5
20	1.2	52	1.5
21	3.6	53	7.8
22	2	54	2.8
23	7.0	55	3.9
24	3.6	56	1.6
25	0	57	0.3
26	2.8	58	2.8
27	2.8	59	3.8
28	2.2	60	0
29	3.7	61	0
30	5.4	62	2.9
31	2.7	63	2.4
32	2.7	64	2.4

IC201

PIN NO.	VOLTAGE	PIN NO.	VOLTAGE
1	3.1	11	3.0
2	4.5	12	0
3	2.7	13	2.7
4	4.5	14	2.8
5	2.7	15	2.0
6	3.6	16	2.0
7	7.5	17	2.8
8	2.7	18	2.8
9	7.5	19	0
10	3.6	20	2.7

IC203

PIN NO.	VOLTAGE	PIN NO.	VOLTAGE
1	1.4	9	0
2	0	10	0.7
3	1.5	11	4.9
4	0	12	4.9
5	1.3	13	0
6	0	14	1.5
7	2.9	15	3.2
8	0.6	16	0.8

IC500

PIN NO.	VOLTAGE	PIN NO.	VOLTAGE
1	3.2	27	0
2	0	28	3.2
3	1.9	29	0
4	3.2	30	3.2
5	3.2	31	3.2
6	3.2	32	3.2
7	3.2	33	3.2
8	0	34	0.4
9	2.4	35	0.5
10	0	36	0
11	3.3	37	2.4
12	0.8	38	0.3
13	2.4	39	0.2
14	0	40	0.1
15	2.4	41	0.2
16	0	42	2.4
17	0	43	0
18	1.5	44	3.2
19	0.6	45	0
20	1.1	46	0
21	3.2	47	1.0
22	3.2	48	1.3
23	3.2	49	3.2
24	3.6	50	3.2
25	3.0	51	0
26	3.0	52	3.2

IC502

PIN NO.	VOLTAGE	PIN NO.	VOLTAGE
1	0	5	3.0
2	0	6	3.0
3	0	7	3.2
4	0	8	3.2

IC503

PIN NO.	VOLTAGE	PIN NO.	VOLTAGE
1	3.1	5	4.2
2	4.2	6	4.2
3	4.2	7	3.0
4	-12.1	8	12.0

AV29BF10ENS
AV29BF10EPS
AV29BF10EES

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